Between tradition and modernisation: a regional comparison of demographic and social behaviour and experiences of different occupational groups in the North of the Netherlands, 1811-1930

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1. Introduction

In this paper we investigate the extent and chronology of the effect of the modernisation processes in the second half of the nineteenth and first decades of the twentieth century, both from the perspective of socio-economically diverging regions and from diverging occupational groups in the north of the Netherlands. The reason to concentrate on the Dutch provinces of Drenthe and Groningen is not because modernisation is expected to have had a particularly strong effect in this region. More important is the availability of very good digitalised sources, combined with the relatively large socioeconomic differences within this area. The area comprises a large city, small towns, traditional and market-oriented countryside, but also an industrialising region (the old peat colonies). These two elements make it possible to compare for diverging circumstances in the effects of the acceleration of all kind of economic, social and cultural developments from the second half of the nineteenth century onwards, often in literature coined with the rather broad container term "modernisation". Prime research question is: under what general circumstances modernisation has the largest measurable effects on the lives and prospects of different social groups.

We will use four rather crude measures to investigate the influence of this modernisation process:

1. ***Age at first marriage of males and females***. The hypothesis is that a fall in the age at first marriage signifies a move from a marriage model based on the necessity to obtain beforehand a regular economic position or niche (a farm, shop or workshop) (Hajnal 1965; Fertig 2005), to a more proletarian marriage regime, where means of subsistence are largely based on present wage earnings and not having a niche is a severe hindrance to conclude marriages (Hofstee 1954).

2. ***Infant mortality***. The assumption is that an important effect of modernisation constitutes the improvement of public provision (sewage system, water provision, 'modern' medical infrastructure) resulting in lower infant and child mortality, to be measured as the mortality of children between 0-1 year, 1-5 year, and 5-12 year.

3. ***Intergenerational occupational/social mobility*** of males. In many publications it has been suggested that in line with the so called modernisation theory "modernisation" and industrialisation go together with a more open (even a more meritocratic) society (Knigge 2015; Zijdeman 2010). Social and economic positions of people might have become to a lesser extent the consequence of their own social background, and more the result of their own efforts and capabilities. Next to this, a change in the intergenerational occupational mobility is in itself also an indication that the economic structure of a region is changing over time, creating new occupations, but also resulting in shifts in the occupational structure. Because we use marriage records that usually give indications of both the

occupation of the groom as of the father, we will restrict ourselves to male occupational mobility. This occupational mobility – because of this in a way quite similar to social mobiolity – we will measure as the mobility between rather large socially quite similar occupational groups, based on Hisclass (Van Leeuwen & Maas 2011). By concentrating on male social mobility, we do not have to deal with the numerous problems with the registration of female occupations in the Dutch civil registration (Paping 2012).

4. ***Geographical mobility/migration***. The assumption is that the rapid developments in transport and information infrastructure which came along with modernizing tendencies in the second half of the nineteenth century, made it far easier to move to other places. It also stimulated to be informed upon labour prospects elsewhere. Especially regions with a large service sector and mechanizing industrial sector are expected to experience an increase in immigration due to modernisation. We will concentrate our research upon migration to regions with a different economic structure from the places of origin. In first instance we will restrict ourselves to migration of unmarried juveniles by comparing the place of marriage with the place of birth.

We will study these four measures using some very large digital databases for the northern Dutch provinces of Groningen and Drenthe, that contain excerpts of information on all births (1811-1909), deaths (1811-1959) and marriages (1811-1934) from the Civil Registration of all municipalities.[1] These databases give abundant information on occupations of those marrying, dying and getting children, but also in the case of brides and grooms and of the deceased of the occupations of parents. These huge databases have become available quite recently and are the results of the provincial archives organizing numerous volunteers to transcribe these sources.

T*able 1: Number of certificates involved in the research*

	Births 1811-1909/11	Marriages 1811-1934/36	Deaths 1811-1959/61	Total
Groningen	695,159	244,226	717,965	1,657,350
Drenthe	335,618	112,986	357,234	805,838
Total	1,030,777	357,212	1,075,199	2,463,188

Table 1 gives an overview of the large number of records we dispose of. It is this enormous wealth of data that makes it possible to pose new questions on demographic and social behaviour in the nineteenth and early twentieth century. This paper is the first in which we use both the Drenthe and Groningen records. In previous papers the second author, Paping, already analysed the complete Groningen databases, for instance to study the registration of female occupations, the importance of live-in servants in the lifecycle over time, and the effects of moving to the city on social chances (Paping 2012; Pawlowski & Paping 2015; Paping 2015). In our research the marriage records play the most important role, as we will use them to measure age at marriage, occupational mobility and geographical mobility. Especially the death records, but also the birth records we will apply to estimate juvenile mortality.

[1] Only the data on the small Groningen municipality of Noorddijk before 1905 are missing in the database. The data on the less populous province of Drenthe covers a 2 year longer period, until 1911, 1961 and 1936.

2. A socio-geographical division of the two provinces

We divided the two Dutch provinces into eight sub-regions consisting of municipalities with a strongly similar socio-economic structure. The similarity in characteristics suggests that the municipalities in these regions will have experienced largely identical developments as a consequence of modernisation, with the inhabitants reacting in general in a rather similar way. We have created this geographical division by taken into account several aspects.

First, we analysed the socio-economic structure and its development over time, for which we looked at the periods 1821/1830, 1861/1870 and 1901/1910 (Table 2). We measured this through a rather simple division of the occupational structure of the fathers of new born children into three broad groups: farmers, (unskilled) labourers and those active in industry and services. A slightly more refined division, we will use throughout the rest of our paper, which is related to Hisclass (Van Leeuwen & Maas 2011), and in which we divide occupations in four groups.[2] We will distinguish 'higher class' (Hisclass 1-4); 'skilled and semi-skilled workers' (Hisclass 5-7, 9); 'farmers' (Hisclass 8) and 'labourers' (Hisclass 10-13). It has to be remarked that due to the Hisclass criteria, the higher clas mainly consists of employers and self-employed in services, whereas the skilled and semi-skilled workers are largely artisans active in industry.

Because we also want to analyse the developments of different groups in the larger and smaller cities and the old peat colonies in more detail, we are considering to introduce an extra category in a later version of this paper with more modern occupations, partly related to the mechanisation and the increasing scale in the economy, but also including those occupations demanding at least a certain amount of education above the primary school. For the analysis of the development of occupational/social mobility mentioned we used a Hissclass division in eleven classes, because this gives a more refined picture then using only four very broad classes.

Table 2. Socio-economic structure of regional parts of the Dutch provinces Groningen and Drenthe (occupations of fathers of children born 1821/1910).[3]

	1821/1830			**1861/1870**			**1901/1910**		
	Indus-try/serv ice	Far-mers	Labou-rers	Indus-try/serv ice	Far-mers	Labou-rers	Indus-try/serv ice	Far-mers	Labou-rers
City of Groningen	77%	1%	23%	74%	2%	24%	75%	1%	25%
Small towns	66%	10%	24%	61%	9%	30%	58%	7%	35%
Old peat colonies	48%	13%	39%	49%	13%	38%	44%	10%	47%
Emerging peat colonies	21%	38%	41%	25%	23%	51%	24%	13%	64%
Traditional rural	23%	48%	28%	21%	44%	35%	21%	39%	39%
Market-oriented rural	38%	18%	44%	34%	15%	51%	30%	9%	61%
Mixed rural	30%	26%	44%	27%	25%	48%	32%	21%	47%
Pauper colonies	35%	20%	45%	22%	18%	60%	32%	25%	44%
Total	**44%**	**19%**	**36%**	**41%**	**18%**	**41%**	**38%**	**14%**	**48%**

[2] However, for the occupational mobility we will use an 11 group division based on Hisclass.

[3] Counting of the digitalised Civil registration databases.

Second, we also took into account the development of population growth in different municipalities during the period 1809-1920 (Table 3). Especially in the two municipalities/regions housing pauper colonies, the population development strongly diverged from elsewhere. While, the economic structure between the small towns and the old peat colonies was quite similar, the population developments were quiet different, with the small towns showing continuously higher growth-rates, even though the old peat colonies often experienced heavy industrialisation from 1840 and even more from 1860 onwards; however, the last development was mainly to off-set the fall in employment due to the diminishing of peat digging and shipping in this region.

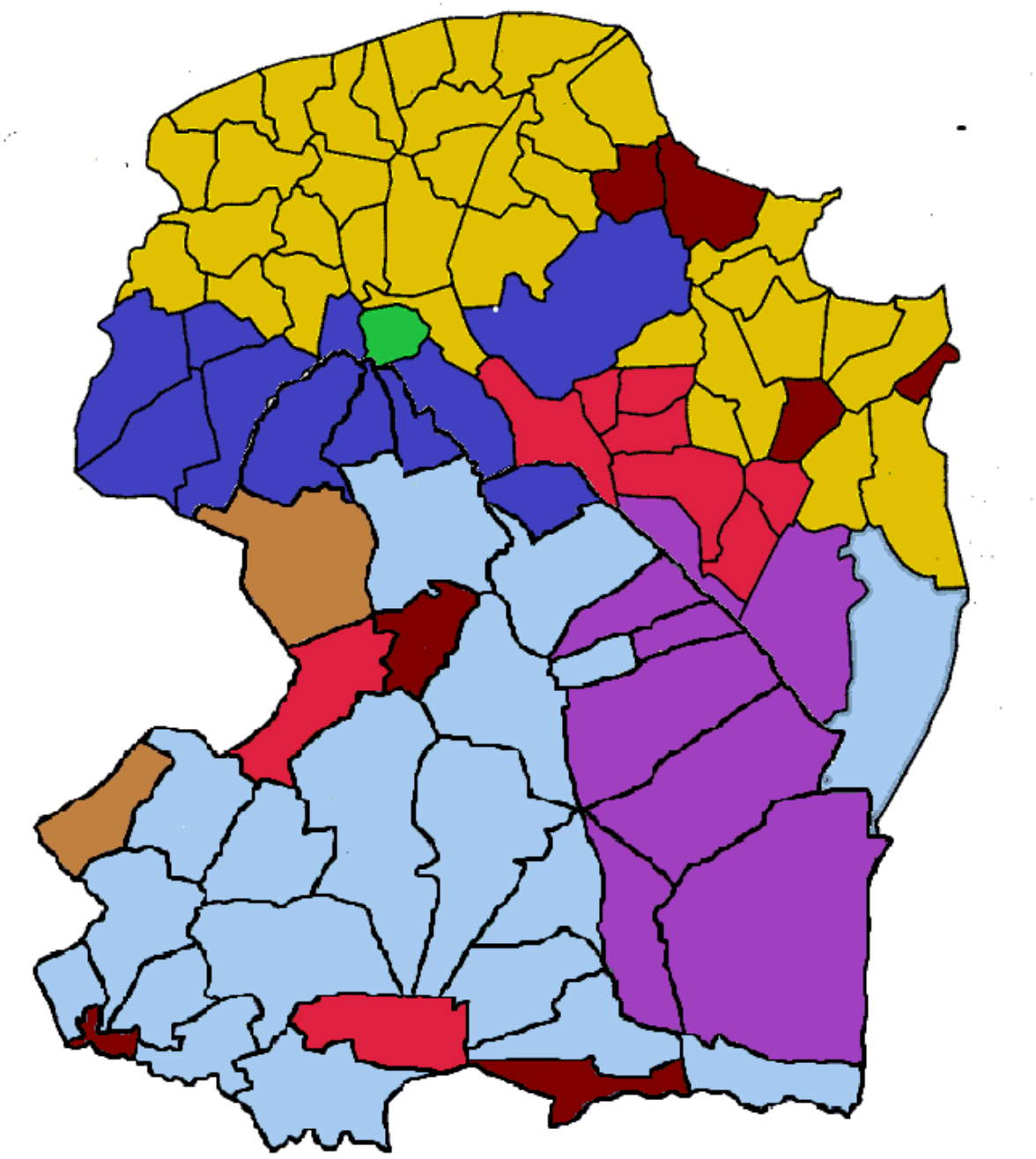
Table 3. Population-development and growth-rates, 1809-1920[4]

	1809	**1840**	**1880**	**1920**	***1809/40***	***1840/80***	***1880/1920***
City of Groningen	26.044	33.484	47.160	90.778	*0.8%*	*0.9%*	*1.7%*
Small towns	14.859	23.498	37.579	65.715	*1.5%*	*1.2%*	*1.4%*
Old peat colonies	32.821	42.681	63.606	79.808	*0.9%*	*1.0%*	*0.6%*
Emerging peat colonies	6.324	10.972	35.373	88.997	*1.8%*	*3.0%*	*2.3%*
Traditional rural	21.563	30.061	52.685	74.485	*1.1%*	*1.1%*	*1.2%*
Market-oriented rural	54.456	73.378	101.371	112.062	*1.0%*	*0.8%*	*0.3%*
Mixed rural	17.898	26.343	37.618	56.037	*1.3%*	*0.9%*	*1.0%*
Pauper colonies	1.560	7.725	5.996	7.422	*5.3%*	*-0.6%*	*0.5%*
Total	**175.525**	**248.142**	**375.570**	**573.304**	***1.1%***	***1.0%***	***1.1%***

If we look at the two provinces as a whole, than it is has to be remarked that population growth did not change during the long nineteenth century, remaining continuously around 1% (table 3). The development of the socio-economic structure of Groningen and Drenthe, taking the occupations of fathers of new born children as a good proxy, shows more changes (table 2). Contrary to what is expected, the share of those specialised in an occupation in industry or service diminished significantly from 44% to 38%. This was mainly the effect of the falling importance of artisans, losing the competition of large-scale industrial production. In the civil registration factory workers, just as many other workers were registered as unskilled labourers, so we cannot make a further distinction. Overall, a strong proletarisation took place in the second half of the nineteenth century, with the share of largely unskilled labourers increasing from 36% to 48%. Geographically, this rise was concentrated to a large extent in the emerging peat colonies and the market-oriented rural area with their huge demand for unskilled labourers, and slightly less in the small towns and the traditional rural area. The decrease in the share of farmers and peasants from 19% to 14% is less unexpected. Clearly, the rise in population went faster than the growth of the number of farm and peasant holdings. In total, these developments meant a definite rise in inequality among the inhabitants, with fewer attractive positions becoming available between 1820 and 1910.

We will end this section with a short description of the characteristics of the eight types of municipalities distinguished in this research:

[4] Source: census-data.



Map 1: Different socio-economic regions in Groningen and Drenthe.

NB: Green: city of Groningen; Dark red: small towns; Pink: old peat colonies; Purple: new peat colonies; Light blue: traditional rural area; Yellow brown: market oriented rural area; Brown: pauper colonies; Dark Blue: mixed rural area.

(1) **A large city**. The inhabitants are nearly all active in the industry and service sector. Population growth became relatively high only in the last decade of the nineteenth century. Previously, urban population growth lagged behind the more rural parts of the two provinces. So urbanisation started only late – though it has to be taken into account that urbanisation rates in the whole of the

Netherlands only went up from 1850 onward, due to already very high rates in the early modern period – with the rise of large-scale industry and the further development of the city of Groningen as the main trading and other service centre of the wider region at the end of the nineteenth century (Kooij 1986). Notwithstanding this late urban rise, we would expect that effects of "modernisation" will show up relatively early in the city. However, it can also be the case that in certain respects the urban inhabitants were already very modern in the first half of the nineteenth century, and because of this the acceleration of developments in the second half of the nineteenth century might have had hardly any visible effect.

(2) **Several smaller towns** and non-agricultural centres. Although small-scale industry, handicrafts and services were the main source of income, the agricultural sector was not completely negligible due to the hinterland of these municipalities, which often also comprised nearby villages. Some small cities showed rapid growth during short periods, for instance due to the development as a governmental centre, to growth of the harbour function or to industrialisation. For the smaller towns, the same accounts as for the large city, though perhaps to a lesser extent. Effects of modernisation might be expected to be visible here earlier than in the countryside, although it might be that to some extent these small towns were already very "modern", for instance in respect to occupational mobility and migration. (Appingedam, Assen, Coevorden, Delfzijl, Meppel, Nieuweschans, Winschoten)

(3) **Old peat colonies**. Peat digging in these often relatively large villages, with a size frequently comparable to small towns, is becoming replaced in the nineteenth century by other economic activities. Usually these places have a relatively large non-agricultural sector, partly experiencing industrialisation in the second half of the nineteenth century, for instance due to the founding of numerous potato flour and straw board factories (Voerman 2001). Nevertheless, the decline in peat digging resulted in a relatively stagnating population. In the old peat colonies unskilled labourers formed a large group of the population, compared to the small towns and the city. Agriculture on land formerly used for peat digging is also of importance. Nevertheless, in parts of these municipalities peat digging remained to play a role in most of the nineteenth century. With the large role of industrialisation, the extensive shipping sector and the large economic changes in these municipalities, again we would expect relatively a lot of influence of modernisation. (Hoogeveen, Hoogezand, Muntendam, Nieuwe Pekela, Oude Pekela, Sappemeer, Veendam, Wildervank, Zuidbroek)

(4) **New (emerging) peat colonies**. This is a diverging group as peat digging started to become very important on different moments in time from the end of the eighteenth century onward. Partly, these municipalities have still very traditional characteristics in the first decades of the nineteenth century. The population in these municipalities is rising rapidly in the nineteenth century. Unskilled labourers formed a large to very large and increasing part of the population. Usually the industry and service sector is relatively less well developed. Originally, the area mainly belonged to the traditional rural region, where at different moments in time rapid economic developments took place. However, because of these differences in time, developments might not be too clear, though changes are expected to be much larger than anywhere else. (Borger, Emmen, Gieten, Odoorn, Onstwedde, Sleen)

(5) **Traditional rural agricultural region**. These municipalities – nearly all situated in the province of Drenthe – have usually a sandy soil and limited possibilities for peat digging, although still large opportunities for land reclamation. The number of farmer families is initially larger than the number of labourer families, although the extent of proletarisation increased during the nineteenth century (Bieleman 1987). Labourers usually also disposed of some land to cultivate and owned some cattle. Specialisation of economic activities was limited with relatively few heads of households primarily

active outside agriculture. Often self-provision and barter still played a major role in agriculture, while food surpluses were supplied to the market. Production for the market, however, became more important during the nineteenth century. At first sight, one would think that this region might be the least effected by the changes accompanied by modernisation. In the twentieth century the sandy region was still considered to be rather backward to a certain extent. This is not to say that there was no effect. As discussed, it was actually in the nineteenth century that this region opened up for the market. (Anloo, Beilen, Dalen, De Wijk, Diever, Dwingeloo, Gasselte, Havelte, Nijeveen, Oosterhesselen, Ruinen, Ruinerwold, Vlagtwedde, Vries, Westerbork, Zuidwolde and Zweeloo)

(6) **Market-oriented capitalistic rural agricultural region**. These municipalities were usually situated in the clay area in north Groningen. The number of farmer families was from the start of the nineteenth century nearly everywhere already considerably smaller than the number of labourer families. The last group increased rapidly, while the number of farms grew to a limited extent, due to the near absence of possibilities for land reclamation. It is economically a much specialised region, with usually many heads of households active in local oriented industry and services (Paping 1995). In most of these municipalities the population growth after 1880 was low or absent. Although the agricultural crisis hit this region severe, the already very market-oriented economy did not change much. Quite modern characteristics are already to be expected in the early nineteenth century, though changes might be few. The very large share of (farm) labourers in this society might not suggest a great dynamic, but perhaps this group was very open for relatively modern behaviour. (Adorp, Aduard, Baflo, Bedum, Beerta, Bellingwolde, Bierum, Eenrum, Ezinge, Finsterwolde, Grijpskerk, Kantens, Kloosterburen, Leens, Loppersum, Meeden, Middelstum, Midwolda, Nieuwolda, Noordbroek, Noorddijk, Oldehove, Scheemda, Stedum, ’t Zandt, ten Boer, Termunten, Uithuizen, Uithuizermeeden, Ulrum, Usquert, Warffum, Wedde, Winsum, Zuidhorn)

(7) **Municipalities with large pauper colonies**. Since the twenties of the nineteenth century some large pauper colonies were founded in Drenthe. These pauper colonies with their highly volatile population, partly coming from the large cities of Holland, influenced the municipal numbers to such an extent, that we did not use these in our analysis (Norg, Vledder).

(8) **Mixed rural municipalities**. This region mainly consists of municipalities with mixed characteristics related to at least two of the groups 3, 4, 5 and 6, fitting less well in those general patterns. These rural municipalities are all situated geographically between the market-oriented clay region in the north and the more traditional sandy region in the south. Most of them are positioned in the vicinity of the city of Groningen. The industry and service sector is slightly better developed than in the sandy traditional parts (more specialisation). The farmers form a more substantial quantitative group than in the clay region. However, there were often still more labourer than farmer families living in these municipalities already at the start of the nineteenth century, but further proletarisation happened only to a limited extent in the course of the nineteenth century. Interestingly, in both the traditional as the market-oriented rural region a rapid increase of the labouring class took place, while in the region just in-between this hardly happened. This might suggest that in the early nineteenth century this mixed region more resembled the relatively modern and dynamic market-oriented area in the north, while later on it began to look more like the traditional rural region. If this is right, this is not a region, where we expect the first and the largest effects of modernisation from the second half of the nineteenth century onward. (Eelde, Grootegast, Haren, Hoogkerk, Leek, Marum, Oldekerk, Peize, Roden, Slochteren, Zuidlaren)

Concluding, from table 2 and 3 it becomes clear that there were large differences both in occupational structure as in population growth between the regions we distinguish. The hypothesis is that one would expect to see the first effects of modernisation in more urban, more market-oriented, but also less agrarian regions. In this respect effects of modernisation should first be visible in the city of Groningen. On the other hand in more rural, less market-oriented and more agricultural regions there might be more scope for changes due to modernisation, than in the regions just mentioned, who might already have relatively modern characteristics from the beginning of the nineteenth century.

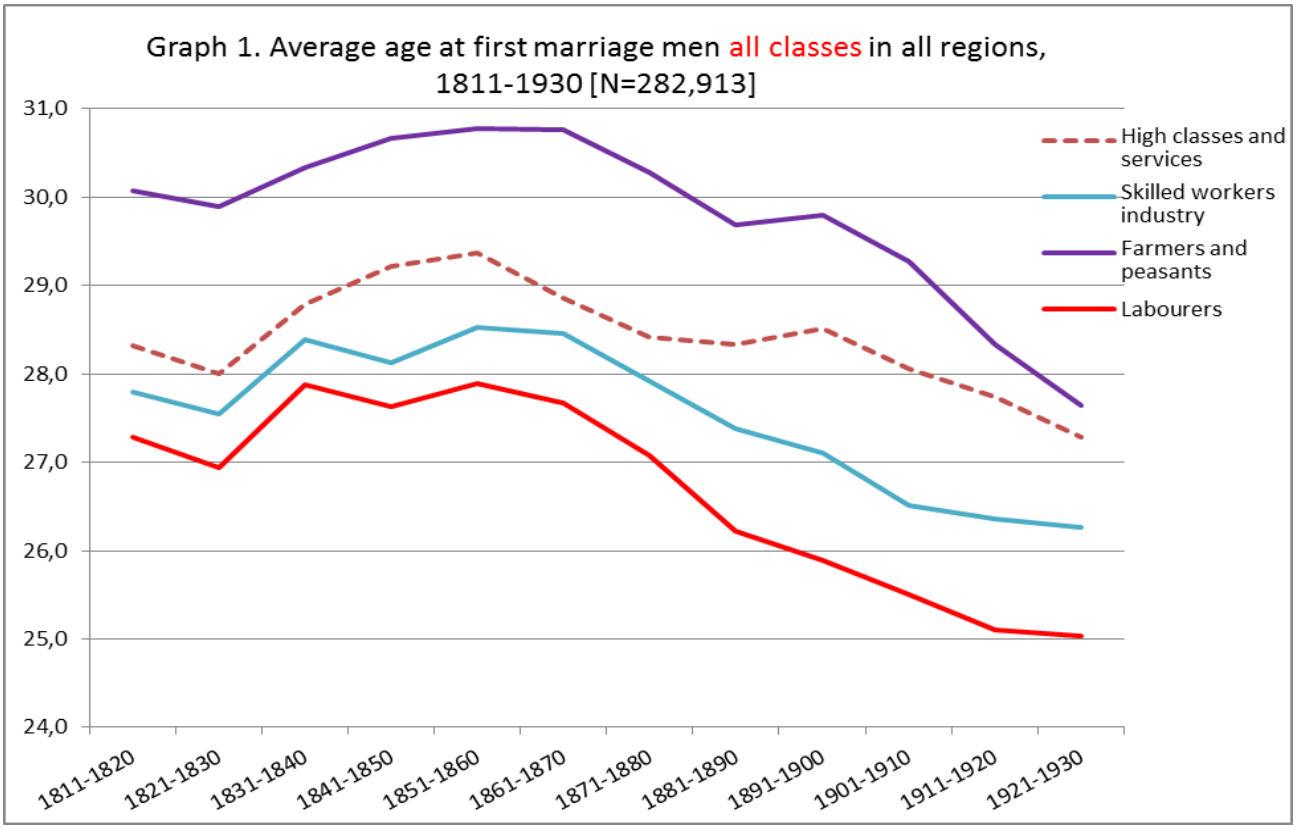
3. Average age at first marriage

There are several reasons why we would expect the average age at marriage to fall because of the acceleration in social and economic developments associated with modernisation. The rise in wage work especially for married men due to the increasing scale of business enterprises meant that marriage partners did not have to wait to marry until they were able to start a business of their own. Previously, even for the labouring class, the possession of a house was not unusual, but with the complete proletarisation of the labouring class, this aim might have been increasingly seen as not feasible. Postponing marriages to save money for establishment after marriage happened less often. Relatively young people could already earn a full salary as wageworkers, so they did not have to wait with marrying. In the Netherlands, Hofstee (1954) already called this a move from an agrarian-artisanal marriage model to a proletarian marriage model. In a sense it can be seen as a movement away from the so-called and recently disputed niche-model (Fertig 2005), in which marriage behaviour and marriage opportunities are seen as restricted severely by the number of available niches in society.

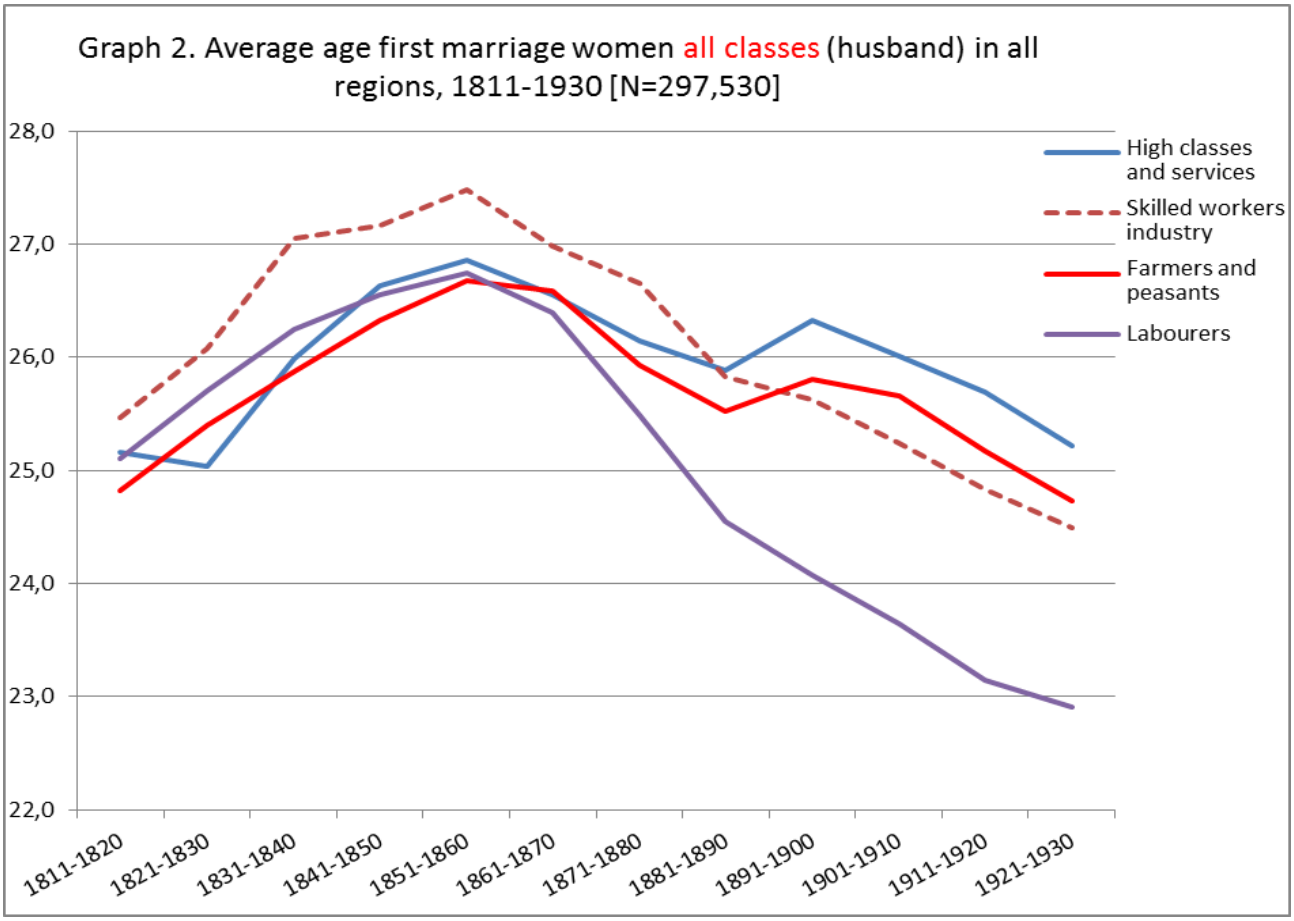
Another reason why during modernisation the age at marriage could lower is that the influence of parents on children diminished because of the shift from a family economy to a wage economy. Besides, an increase in migration, especially to cities, might have lowered parental influence. The idea behind this argument is of course that parents had an inhibiting effect on young marriages.

Differences between social groups

Graph 1 indicates that the age at marriage for males in the provinces Groningen and Drenthe indeed fell strongly from 1860 onwards. Until that period the average ages at marriage of males even tended to increase. Surprisingly, for each of the four social groups developments went in the same direction. Some proof can be found for the statement that proletarised wageworkers (class 4) indeed married younger; however, this was an effect that already existed in the period 1811-1820. Differences between the categories were very consistent over time, with farmers (class 3) marrying – not unexpectedly, as for them the niche-aspect might have played the largest role – at the highest age. They were followed by the high classes and then the skilled and semi-skilled workers (class 2). The start in the decrease of ages at marriage of male farmers was a decade later (after 1870) than the other groups. However, until the twenties of the twentieth century their average age at marriage diminished with more than 3 years, just as much as that of the labourers. In the highest social groups (class 1) outside agriculture this fall was relatively limited, just as for the skilled and semi-skilled workers (class 2), the two groups in which we would expect the most modern occupations.

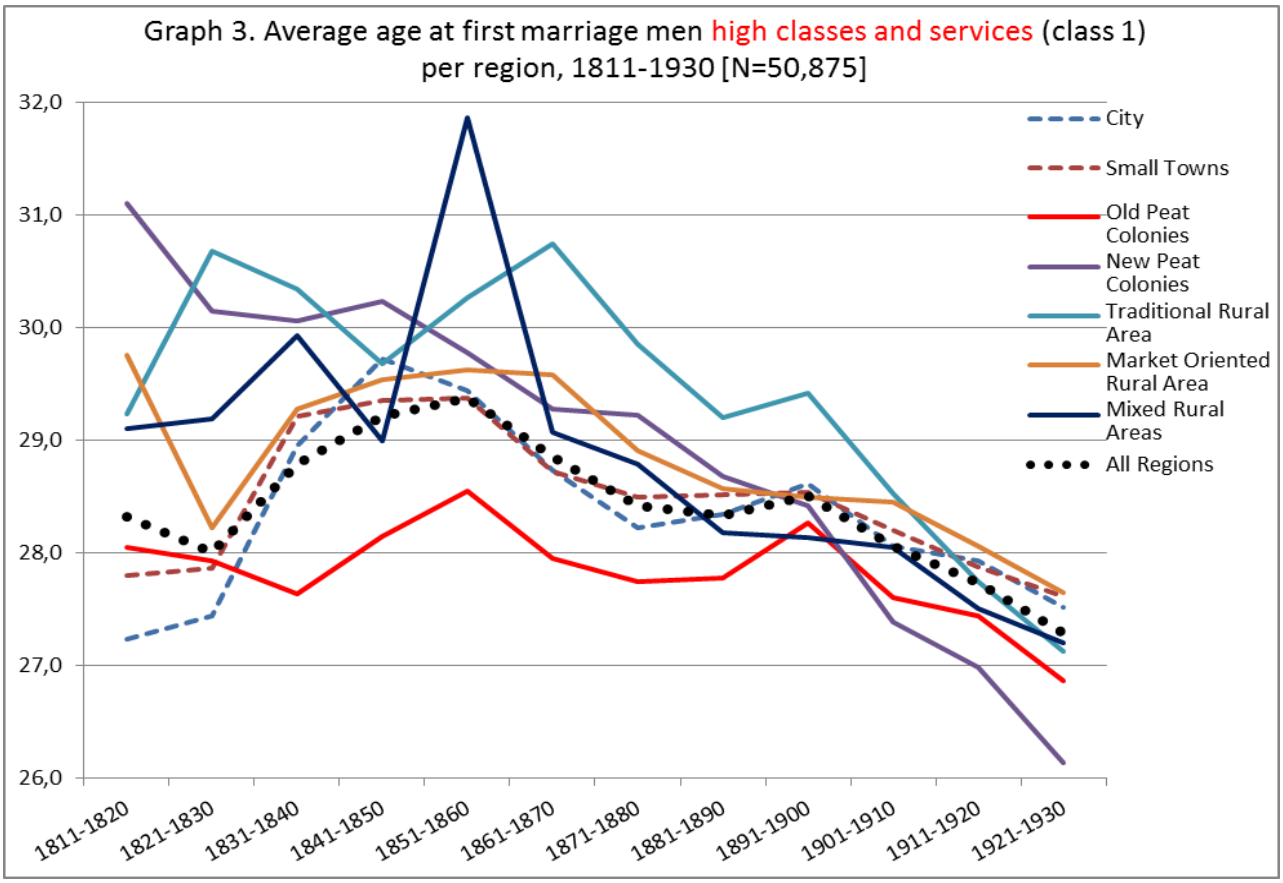


Differences of the female age at first marriage between occupational groups were far less, as can be seen in graph 2. Also these were less consistent over time. For the period 1811-1860 differences were small; only those women marrying skilled and semi-skilled workers – mainly the wives of self-employed artisans and tradesmen – were marrying consistently nearly a year later. For others the social group did not seem to matter. After 1860 female marriage ages also started to fall, especially of those women marrying labourers (class 4). The average age fell four years until 23. If there was a proletarian marriage model for women, it only came into effect in the last decades of the nineteenth century. There was also a distinctive fall in the age at marriage for the girls marrying skilled and semi-skilled workers (class 2). Surprisingly, for females marrying farmers (class 3) or females marrying men with occupation classified as higher class (class 1) the average ages at marriage fell only to a relatively limited extent between 1860 and 1930. For the more fortunate group postponing marriages remained important. In both social groups age differences between marriage partners might have diminished slightly.

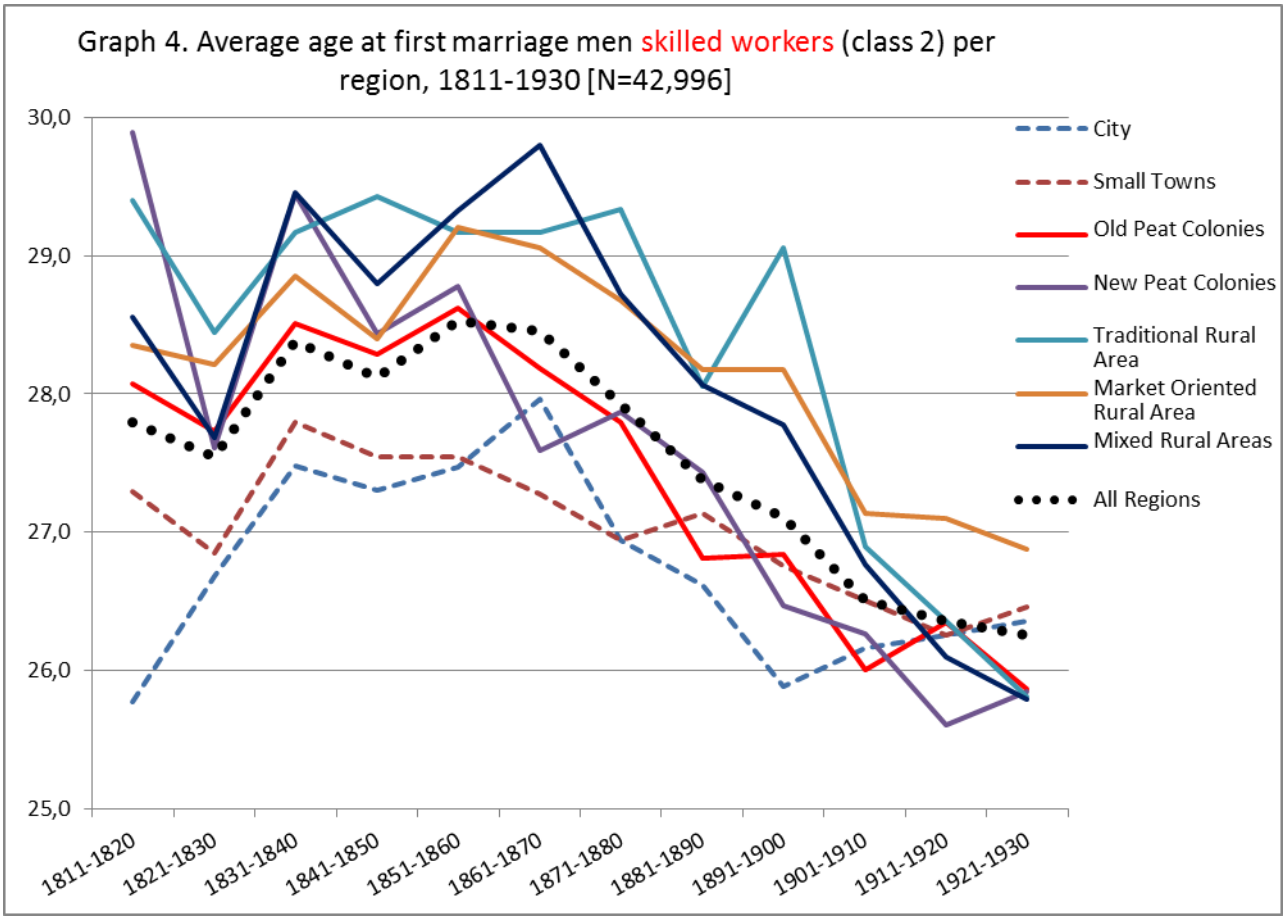


Geographical differences for each social group: male ages at marriage

Graph 3 shows the developments of average ages at marriages for the highest social groups (Hisclass 1-4), which, however, also include independent shippers, merchants and shopkeepers, as these quite large occupational groups active in the service sector are ranked relatively high in the Hisclass scheme. The males in the city of Groningen, the small towns and the large market-oriented rural area followed largely the general tendency of at first a rise and afterwards a fall in age at marriage. Strongly diverging developments especially can be seen within the traditional rural area, where averages age at marriage for this higher non-agrarian social group shows a strong and continuous decrease, which is even more the case in the emerging peat colonies, which completely changed from character in this century. On the other side we find the old peat colonies with its numerous shippers and merchants, a group where the average age at first marriage, although showing some fluctuations, hardly diminished between 1811 and 1930. Looking at graph 3 the most interesting aspect is the very strong convergence of male ages at marriage of this group from 1871-1880 onwards. In the period that we expect the largest influence of modernisation, the prime effect seems to be that the actual place where one lived does not play a large role anymore in male marriage decisions of the higher social class and the employers and self-employed in the service sector.

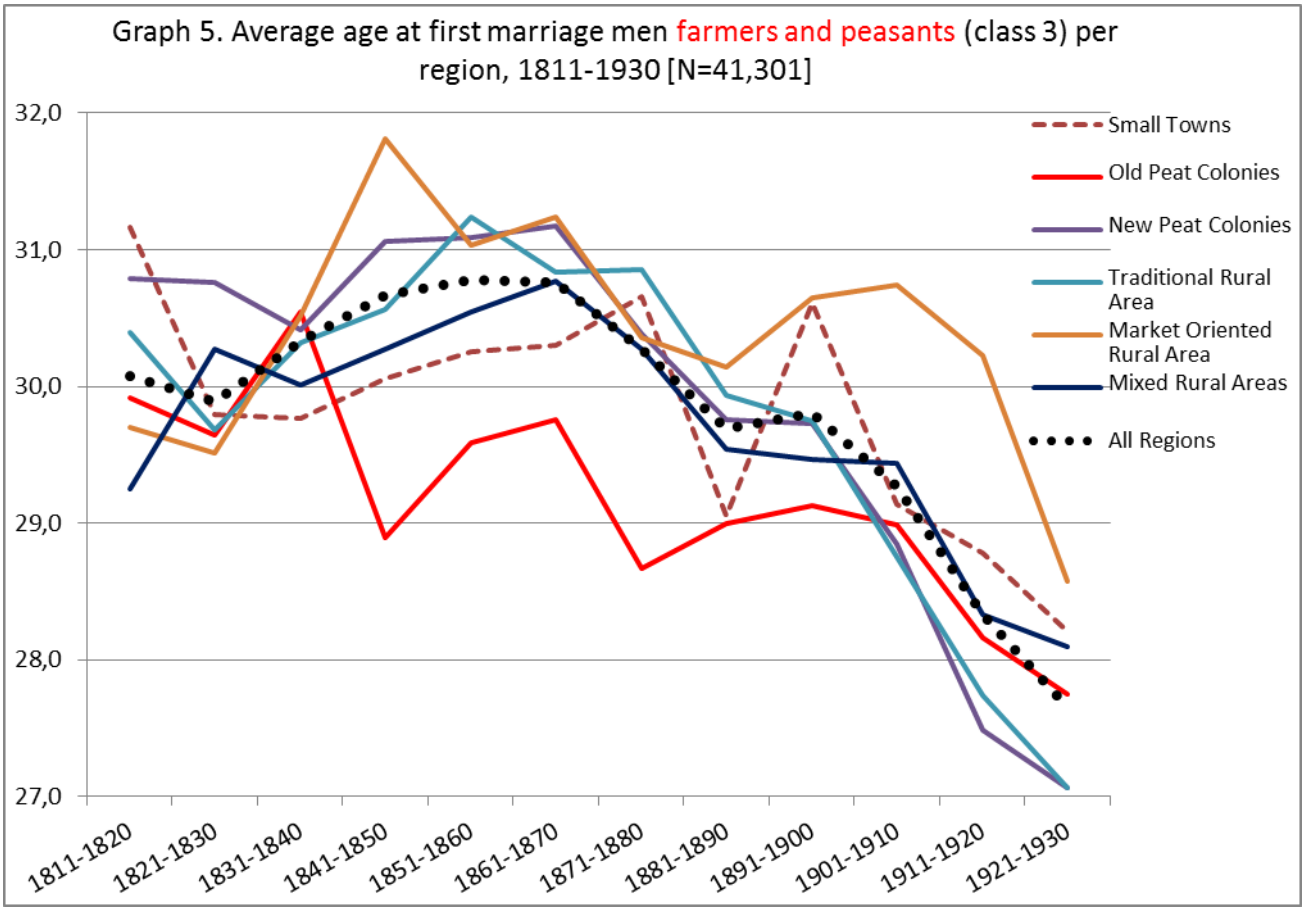


Graph 4 shows actually the same convergence of ages at marriage in the different regions for class 2, mainly consisting of those skilled and semi-skilled workers active in industry, however, only from 1901 onwards. That this happened only later might be expected because this class largely comprises of less modern artisanal occupations, like carpenter, tailor, shoemaker, cooper and so on. Local circumstances remained of more importance for male marriage decisions of these craftsmen for a longer time. Interesting in this respect, is the development of the male age at marriage of these artisans in the traditional rural area and to a lesser extent the mixed rural area, which was relatively high in the nineteenth century, but ended up relatively low in the period 1911-1930. The same group in the market-oriented rural region followed the same overall pattern; however, average ages at marriage remained in comparison with other groups high in the early twentieth century. Relatively low were the average ages at marriage of these artisans in the city of Groningen, and in the small towns. Finding a niche seems to have hampered the decision to marry in these urban regions only to a limited extent. Although in both regions the general development occurred of first an increase in age at marriage and then a decrease, the ages at marriage in the long run hardly fell as much as was the case everywhere in the countryside. If modernisation caused ages at marriage of skilled and semi-skilled workers to fall significantly, than this seems only the case for the countryside in the north of the Netherlands.



Interestingly, for farmers we do not see such a convergence of male average ages at marriage (graph 5). Geographical differences were relatively small in the period 1811-1840, increased rapidly in the period 1841/1850, diminished slightly afterwards, though remained high during the whole period until 1930.

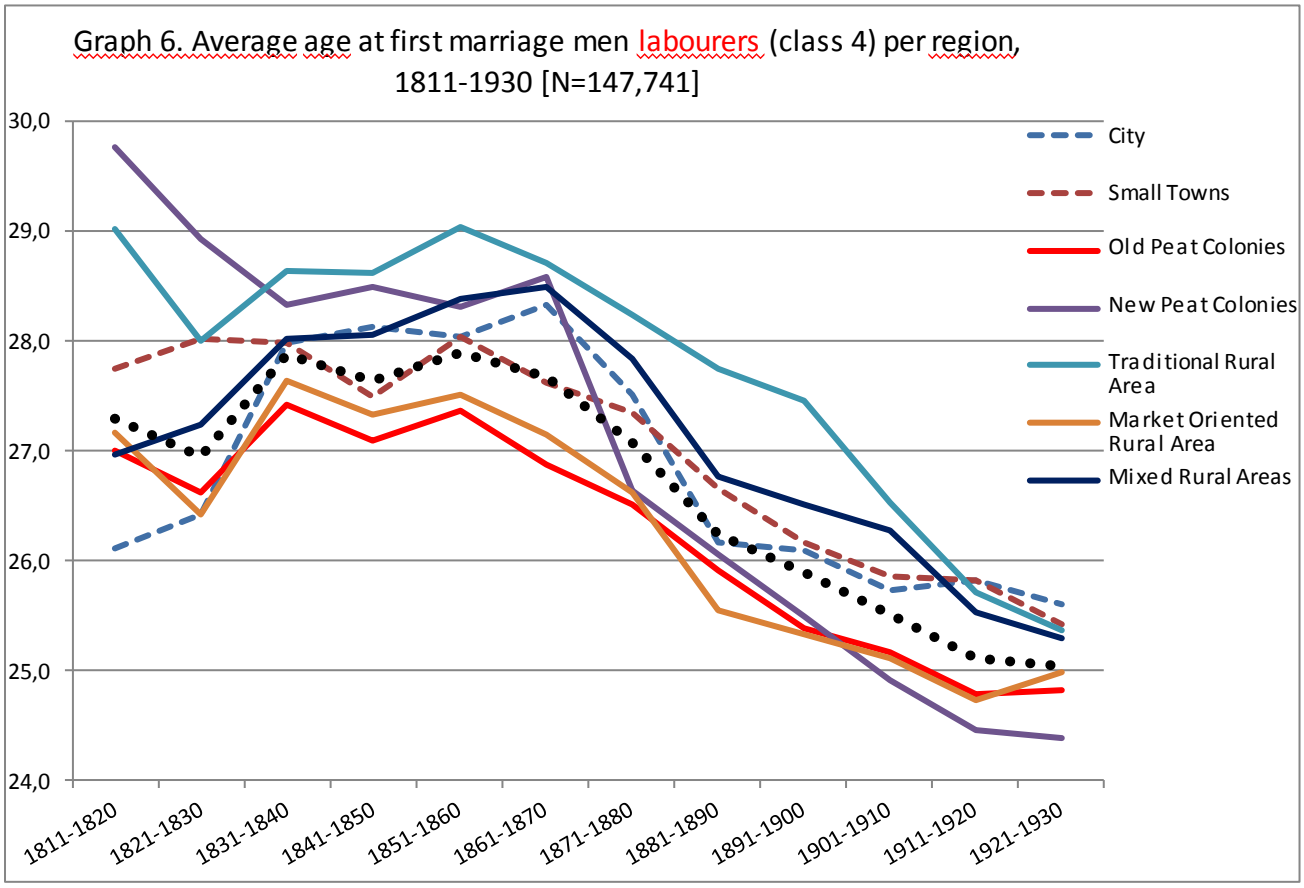
The fall in ages at marriage of farmers was the highest in both the traditional rural area and the new peat colonies, originally the least market-oriented parts of the provinces under study. Waiting for a farmstead might have resulted in postponement of marriages in the early nineteenth century (Verduin 1972, 89). However, the large possibilities to reclaim land and in this way start a brand new farm, might have enlarged the possibilities for early marriages in these regions. In the market-oriented rural area would-be farmers did not have such possibilities to acquire new farms, so their average ages at marriages remained high, though they show a tendency to fall in most of the nineteenth century. It was only in the period 1921/1930 that the average age of farmers in this market-oriented area again fell under 30. Traditional marriage postponement will have played a large role for this rather rich group, forming the highest social class in north-Groningen. Difficult to explain is the development of the ages at marriage of male farmers in the old peat colony that does not fit very well in the general pattern, with already relatively low ages at marriage in the whole period 1840-1900. However, it has to be said that these ages at marriage were low compared to other farmers, though they were still high if we would compare them with other occupational groups in the same period (see graph 1).



For the poorest part of society, the labourers, a tendency to geographical convergence of male ages at marriage is also far less clear after 1840 (graph 6). Strangely, differences were huge in the period 1811-1830 to diminish partly in the period1831/1840. Afterwards, differences slightly increased to decrease somewhat in the first decades of the twentieth century. Interestingly geographical differences in ages at marriage of male labourers remained remarkably stable over time. The nicest examples are the labourers of the old peat colony and of the market-oriented rural area who experienced nearly completely the same development, on average always marrying a few months earlier than the overall average.

It is also useful to point at the development of the male average age at marriage of labourers living in the large city of Groningen. In the period 1811/1820 they were relatively young, though in the next decades this marriage age increased rather sharply with two years, to decrease again from 1870 onward. However, they remained relatively old in the first three decades of the twentieth century. In the traditional rural area and also in the emerging peat colonies male labourers married very late in the first half of the nineteenth century. There is absolutely no sign of a proletarised marriage model in these regions. However, male ages at marriage in the traditional region fell from 29 in the period 1851/60 to less than 26 in the period 1911/1930, suggesting indeed that this model gradually lost its importance. Farmsteads became more and more impossible to attain for labourers in this region with rising proletarisation, so the reasons to postpone marriage diminished. This development was even stronger in the emerging peat colonies where unskilled labourers could dig peat and earn a good wage

already at a relatively young age, while there were not much prospects to a different future in this region, in which unskilled labourer formed more than 60% of the population (table 2). Not surprisingly, male ages at marriage of labourers were lowest in exactly this region after the turn of the century.

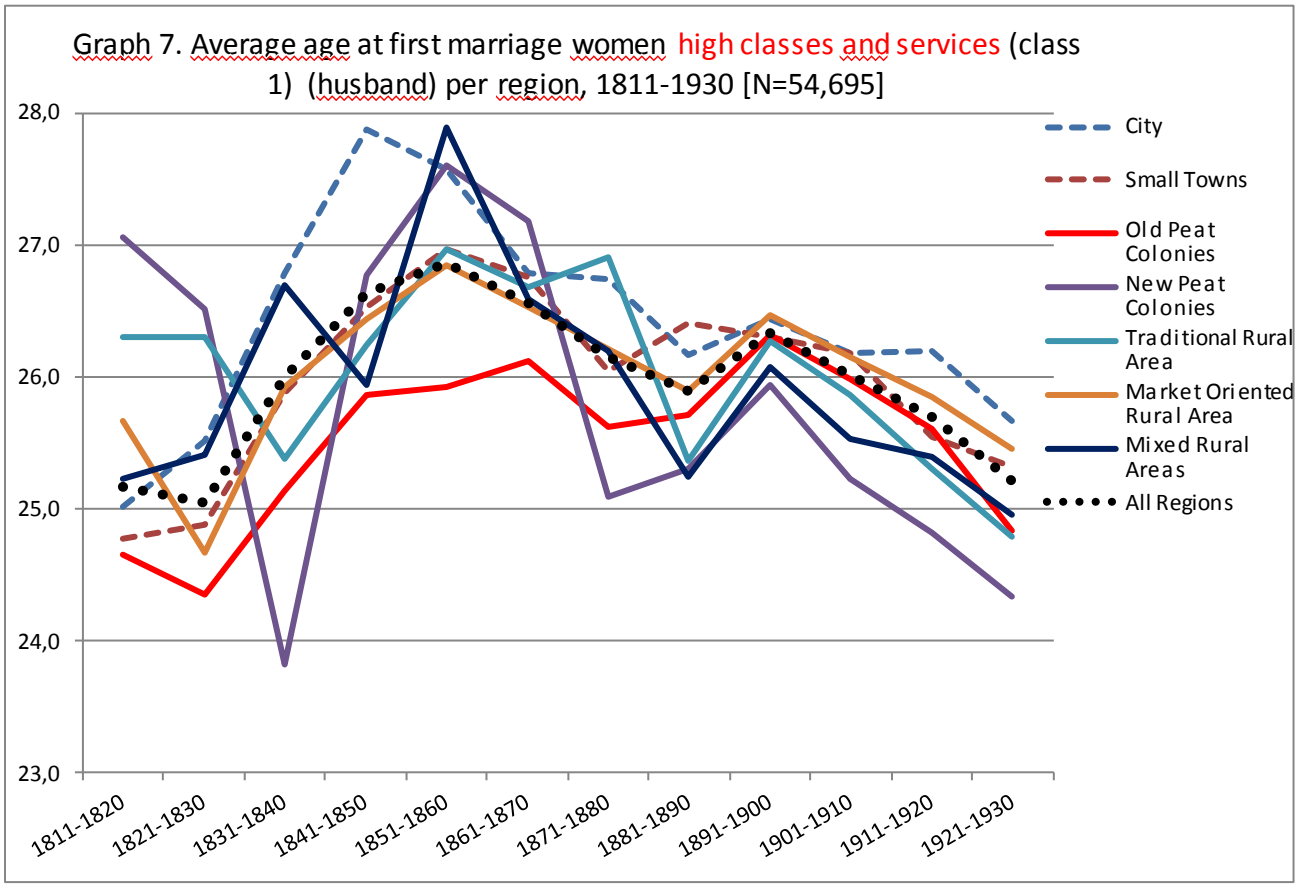


Geographical differences for each social group: female ages at marriage

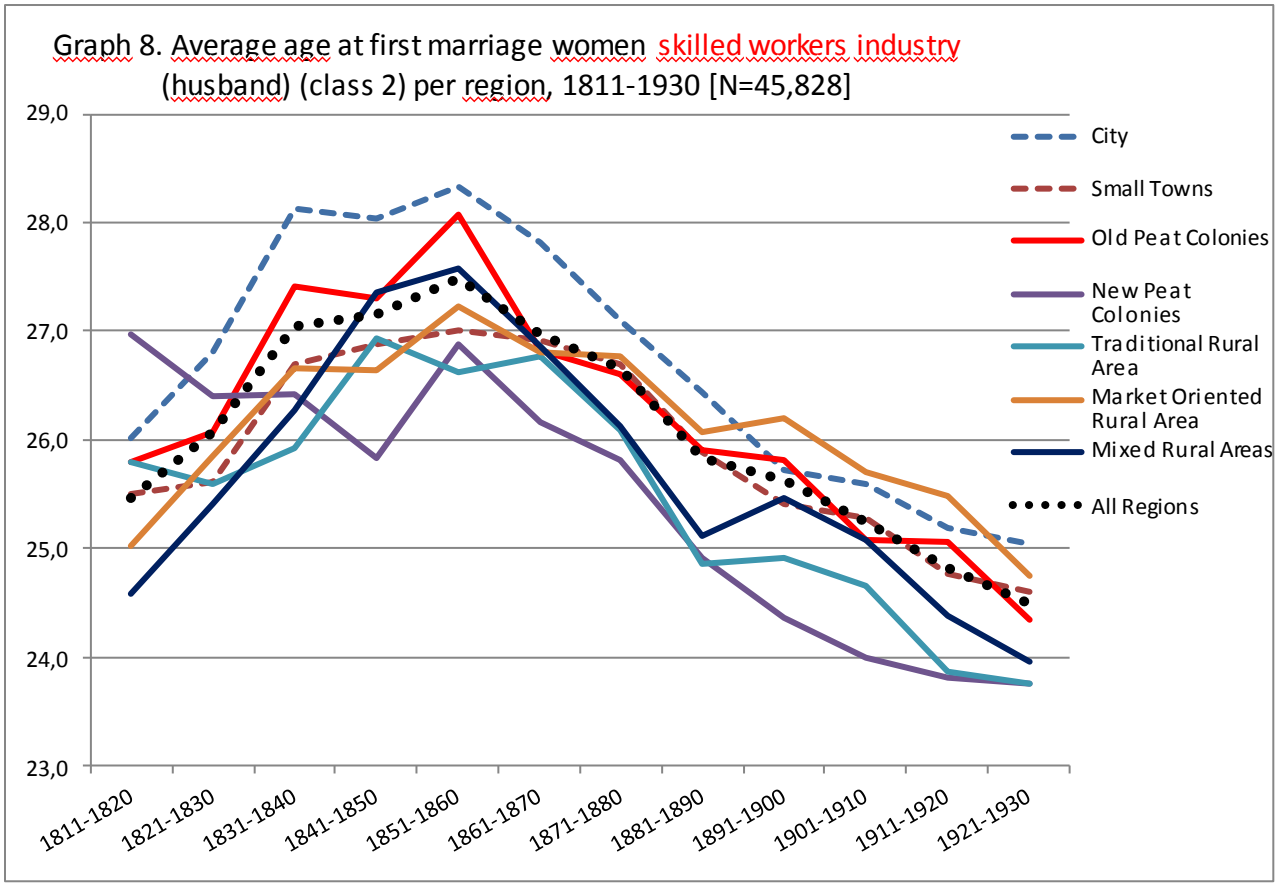
For those women marrying males with occupations ranked in the higher social classes or being employer or self-employed in services, we can notice also a slight tendency to geographical convergence of ages at marriage starting around 1861/1870 (graph 7). Remarkable are the consistently relatively high ages at marriage in the city of Groningen during nearly the whole period, except for 1811/1820.

This suggests persistently lower marriage chances in the big city for this well-to-do group of females, which is difficult to explain, but might be the effect of older female servants still being attractive marriage partners for merchants and shopkeepers in the city. The relatively very low ages at marriages within the peat colonies must be the effect of the plentiful wives of shippers in this period of flourishing shipping in this region. With the deterioration of peat colonial shipping in the second half of the nineteenth century this difference with the rest completely disappears. Contrary to the

developments elsewhere the age at marriage of brides in the old peat colonies even increased until 1891/1900. The strong fluctuations in the ages at marriage of the wives of those with occupations in higher social classes or active in the service sector in the emerging new peat colonies in the first half of the nineteenth century have to be contributed to the limited size of this group, making the series quite unstable. However, first ages at marriage of brides of males with occupations in higher classes or active in the service sector in most regions (small towns, market-oriented rural area, and traditional rural area) conformed to the general pattern: an increase until 1851/1860, and afterwards a continuous fall until 1921/1930.

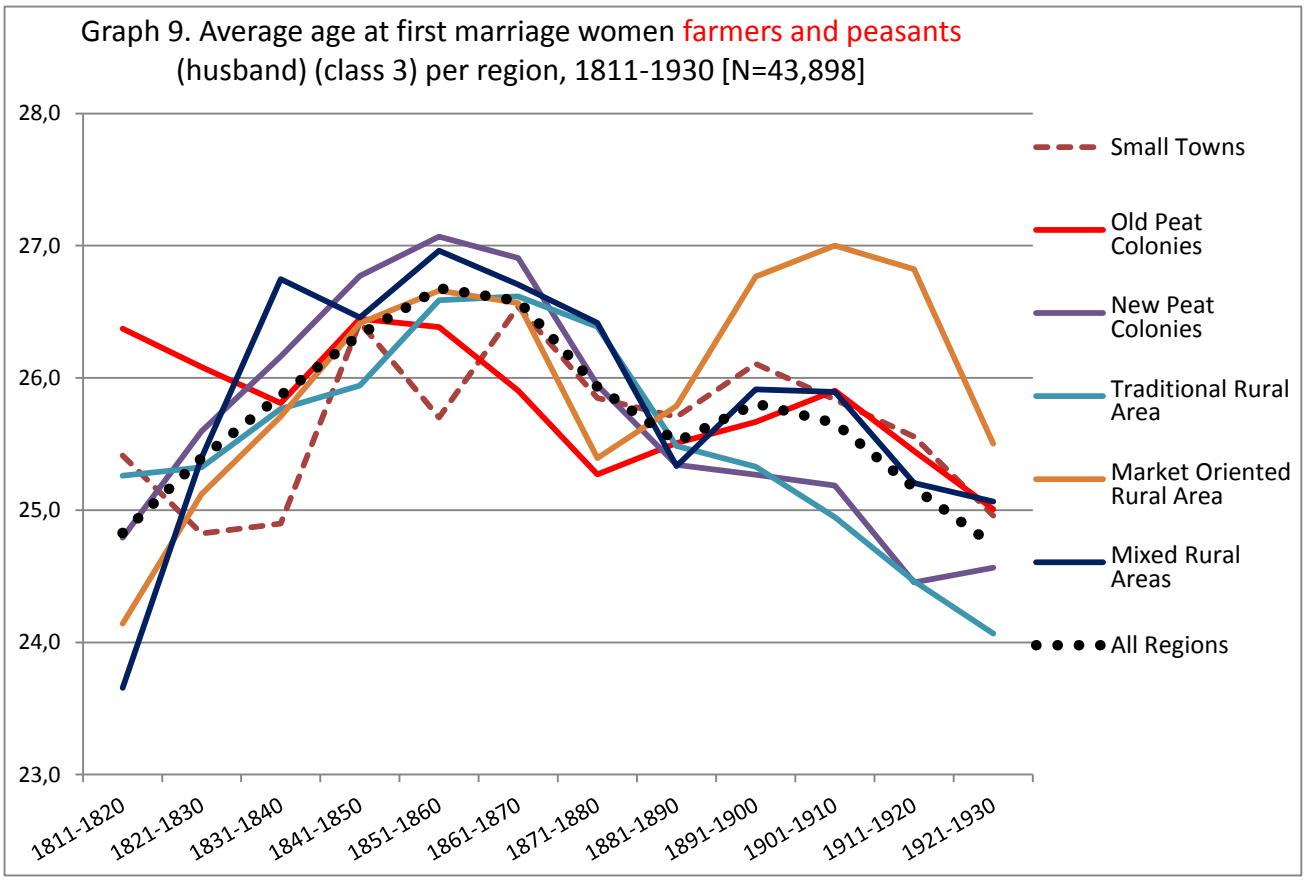


Rather similar developments show up when looking at the ages at marriages of the wives of skilled and semi-skilled workers in industry. Most regions adhered to the pattern of a rise until 1851/60, afterwards the age at marriage started to decrease, in this case also in the old peat colony. Again for this social group female ages at marriage were nearly consistently higher in the city of Groningen, although this age also fell strongly from the end of the nineteenth century onwards. Again this might be related to a strong position of older urban servants on the marriage market, certainly if we take into account that these females usually married relatively young craftsmen (see graph 4). On the other hand, the brides of artisans living in the traditional rural area, and after 1840 also the emerging peat colonies were consistently younger, though their age at marriage followed also the same general trend, with a massive fall after 1860 of more than 3 years.

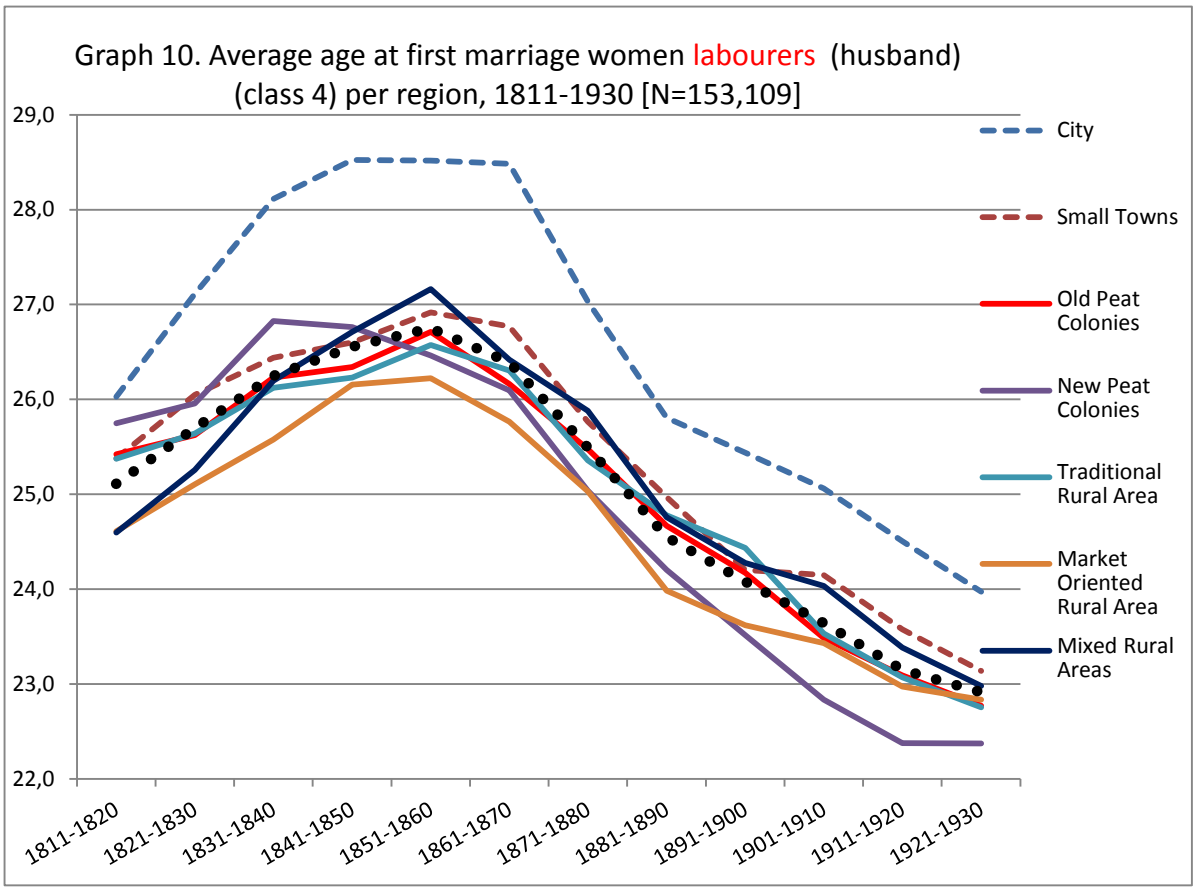


More than in other social groups, geographical differences in ages at marriage remained the same over the whole period, suggesting that modernisation did not influence the underlying "industrial" structures of craftsmanship to a great extent. This continuity of geographical differences between ages at marriage we also came across when investigating the data of the male artisans themselves, although the males show more convergence over time (graph 4).

The development of the average ages at marriage of farmers' wives highly reflects the development of the marriage age of their male partners. Geographical differences fluctuated strongly, but there does not seem to have been a long term tendency towards convergence, although in some periods these differences were very small, for instance 1891/1900, to increase again directly afterwards. Most of the regions adhered to the general pattern of first a rise in the age at marriage and after 1851/1860 a fall. This last decrease was strongest in the traditional rural area and the new peat colonies, exactly the regions where you would expect that waiting for a niche in the form of a farmstead might have induced marriage postponement even for females. However, if this pattern might have existed earlier – quite low female ages at marriage of about 25-26 do not point at this – it really disappeared from the period 1871/1880 onwards. Again the rich farmers in the market-oriented region followed a different pattern. Farms were expensive and scarce in this region, and this became even more problematic in the course of the second half of the nineteenth century. Consequently, for would-be farmers, but also for their brides it remained attractive to postpone marriage a bit to augment the chance on a farm of their own; female ages at marriage of farmers in the market-oriented area even reached a peak of 27 around 1900.



For the largest group in society the wives of the unskilled labourers, there was hardly any convergence in the ages at first marriage. The prime reason for this is that differences between rural regions were already quite small in the early decades of the nineteenth century, within a range of about one year, and that remained the case until 1930. The wives of labourers in small towns also fit perfectly in this pattern, though being continuously relatively a little older than their rural sisters. Again, it were the labourers' wives in the large city of Groningen that were – again – the exception, marrying on average one to sometimes two years later than in those working class women living in the countryside. Nevertheless, the development of the female labourers' age at marriage in the city of Groningen was largely in line with the countryside, with a steep fall after 1870. However, it has to be remark this fall already started a decade earlier (from 1860 onwards) in the countryside. Interestingly the differences between the regions also were rather constant over time. Labourer wives in the market-oriented rural area married youngest, until they were taken over around 1900 by the wives of peat labourers, who definitely adhered to the proletarian model with average ages at marriage between 22 and 23 in the first decades of the twentieth century.



In conclusion, nearly all the average ages at first marriage for different social groups in different regions show the same trend during the period under research. In the first half of the nineteenth century average ages at marriage began to increase, however from 1860 onwards – exactly the period in which we expect modernisation to have effect – there was a continuous downfall. There was a convergence in ages at marriage of non-agrarian middle class groups, usually starting around the same time, which might be the result from diminishing differences between regions as a consequence of modernisation. However, for the two other groups farmers and unskilled labourers' ages at marriage did not converge, suggesting that specific local situations remained of importance for the marriage decisions of these groups.

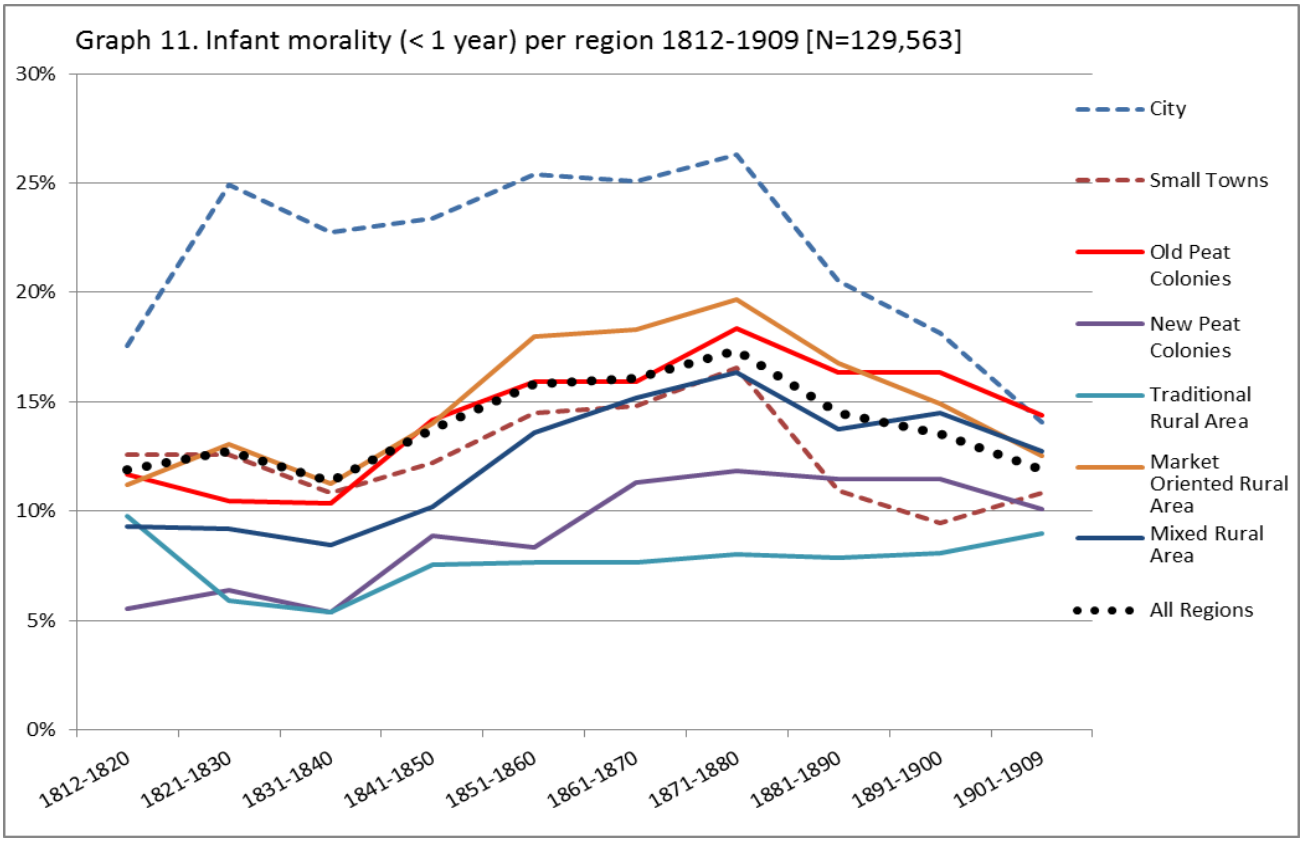
Although it is sometimes suggested that the general fall in the average age at marriage might be connected to a move from an "agrarian-artisanal marriage model" to a "proletarian model", our findings show that the general fall in age at marriage over time was not so much related to more people becoming wage workers (although this actually happened), but more to a distinct fall of the age at marriage of each occupational group. If the so-called proletarian model became more important, it was the case for all social groups; one could even say that even unskilled labourers moved in the direction of this model only in the second half of the nineteenth century, while they beforehand adhered to the agrarian-artisanal model. Geographically, the effects of modernisation on average ages at marriage seem to have been largest in the traditional rural area and even more in the strongly developing emerging peat colonies. The effects on the other hand were most limited in the city of Groningen. The reason for this difference might be that modernisation from the second half of the nineteenth century did change far less in the city of Groningen, than in original more backward and less market-oriented rural areas.

4. Child mortality

One of the major developments in the second half of the nineteenth and first half of the twentieth century was the demographic transition. Generally this is described as first a fall in mortality, which is later followed by a fall in fertility. In this paper we will only look at child mortality rates. Large improvements in the standard-of-living in the second half of the nineteenth century, combined with improvements in the medical sphere, better hygiene, more attention to the supply of clean drinking water and the introduction of sewage systems all worked in the direction of a substantial fall in mortality in general, and also in child mortality. Especially this must have had large effects in urbanised environments. We will make a difference between infant mortality below the age of 1, mortality between the age of 1 and 5, and mortality of children aged 5 to 12. Although our databases supply data on the occupations of the parents of infants, they are not complete and fully consistent; because of this, the number of children born within each social group is difficult to relate to those dying from the same group. Actually, you need family reconstitution data to reliably do this (compare Paping & Schansker 2014) Because of this we will only present general figures for each region.

We know from the mortality registers the age of all the deceased in a certain year per municipality. We have related the number of deceased children rather roughly to the number of births in the relevant year. The number of children dying before their first year we related to the number being born in the same year. The number of children dying between one and five year we related to the average number of births one to four years earlier, while for those dying between five and twelve year we used a delay of five to eleven years. As a consequence we do not have child mortality data above the age of 1 for the period 1812/1820. At the moment we used a rather crude measure. In the future it might be possible to relate all the deceased children to a very specific birth year, taking into account their age. This would be a more precise measure, but as we used ten year averages in this paper, the effect will be only marginal. We also might be able to correct for migration in the future, by taking the birth place of deceased children into account. However, at the moment we assumed that children did not migrate between the geographical areas we distinguished before the age of 12. In reality this will not be true of course, but the effect of this assumption will presumably be rather limited, as juvenile migration rates are not high, and family migrations were often to municipalities in the same region.

Graph 11 makes immediately clear that there were enormous differences between infant mortality in the large city of Groningen on the one hand, and in the smaller towns and the countryside on the other hand. Until 1871/1880 urban infant mortality rates might be even double the rural rates. Perhaps contrary to what might be expected, infant mortality rates in the countryside and the small towns went up between 1831/1840 and 1871/1880, which might be related to the deteriorating food situation especially in the forties and fifties. However, this development cannot explain why this mortality increase continued persistently in all regions after 1860, as real incomes were definitely on the rise (Paping & Collenteur 1998).



Within the countryside there were also considerable differences, although they are seemingly dwarfed by the differences with the city of Groningen. Death rates of infants were relatively very low in the traditional rural area and the rather similar emerging new peat colonies mainly situated in Drenthe in the first half of the nineteenth century. These death rates on the other hand were high in both the market-oriented rural area and the old peat colonies mainly situated in Groningen. Absolute differences in percentage of deceased children in the countryside were increasing clearly until 1880; however, relatively this increase was less.

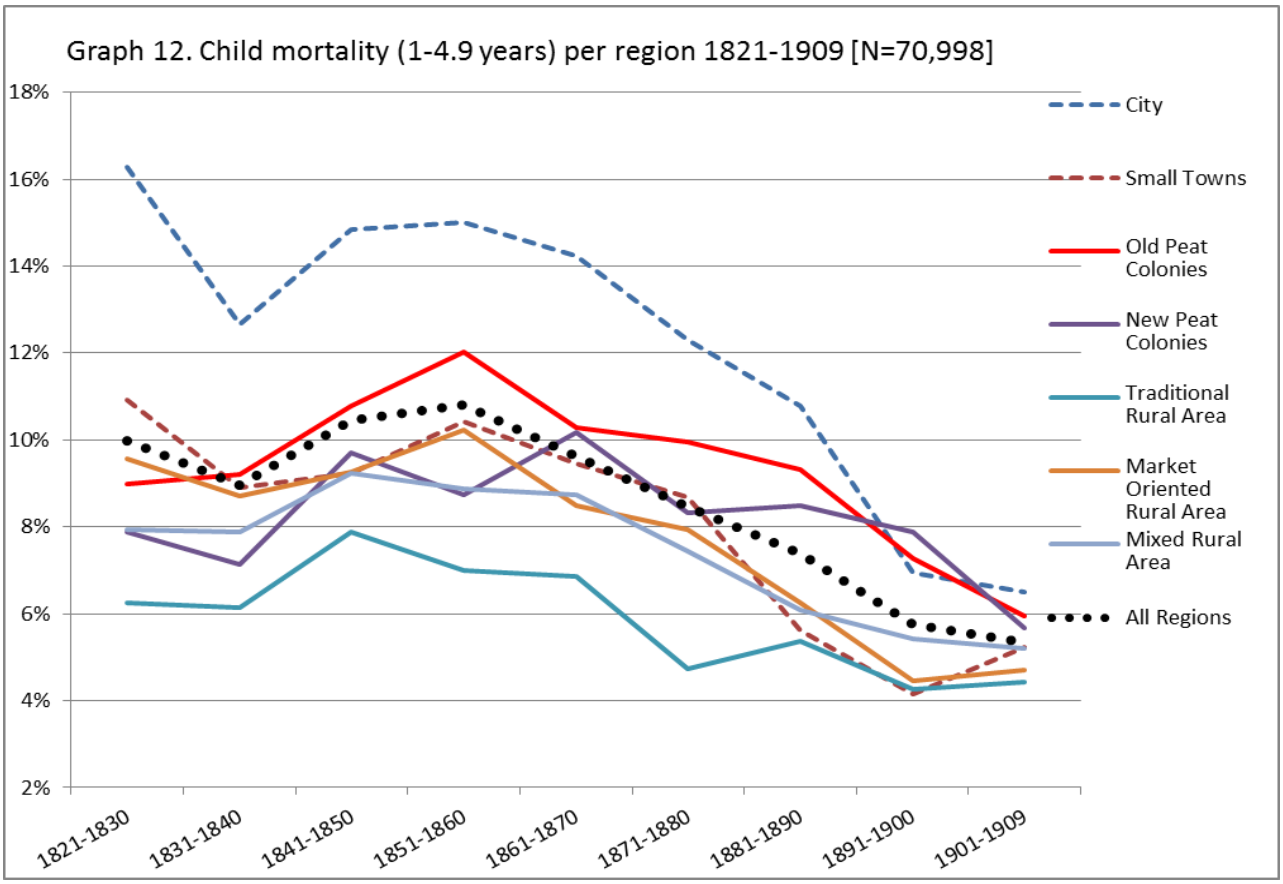
The death rates of infants in small towns started quite high in the first half of the nineteenth century, but increased far less than elsewhere, which might be an effect of the increase in relative importance within this group of the cities (Assen, Meppel) situated in healthy Drenthe.

The development after 1880 seems to have been especially of importance for the effects of modernisation. Infant mortality rates started to decrease rapidly in a large part of the region studied. However, the fall in infant mortality was definitely the largest in the city of Groningen and in the small towns. Possibly we see here the effect of the improvement of urban sewage systems, while their construction was rather delayed in the countryside. Nevertheless, the urban infant mortality remained relatively high until after 1900; this, however, might be an effect of the location of a large hospital in the city of Groningen, taking into account that infant mortality rates in the small towns without hospitals were even relatively low.

A clear exception is the development of the infant mortality rates in the traditional rural area. During the whole nineteenth century and first decades of the twentieth century these were very low. They were even so low, that any development coming along with modernisation did not have any effect at

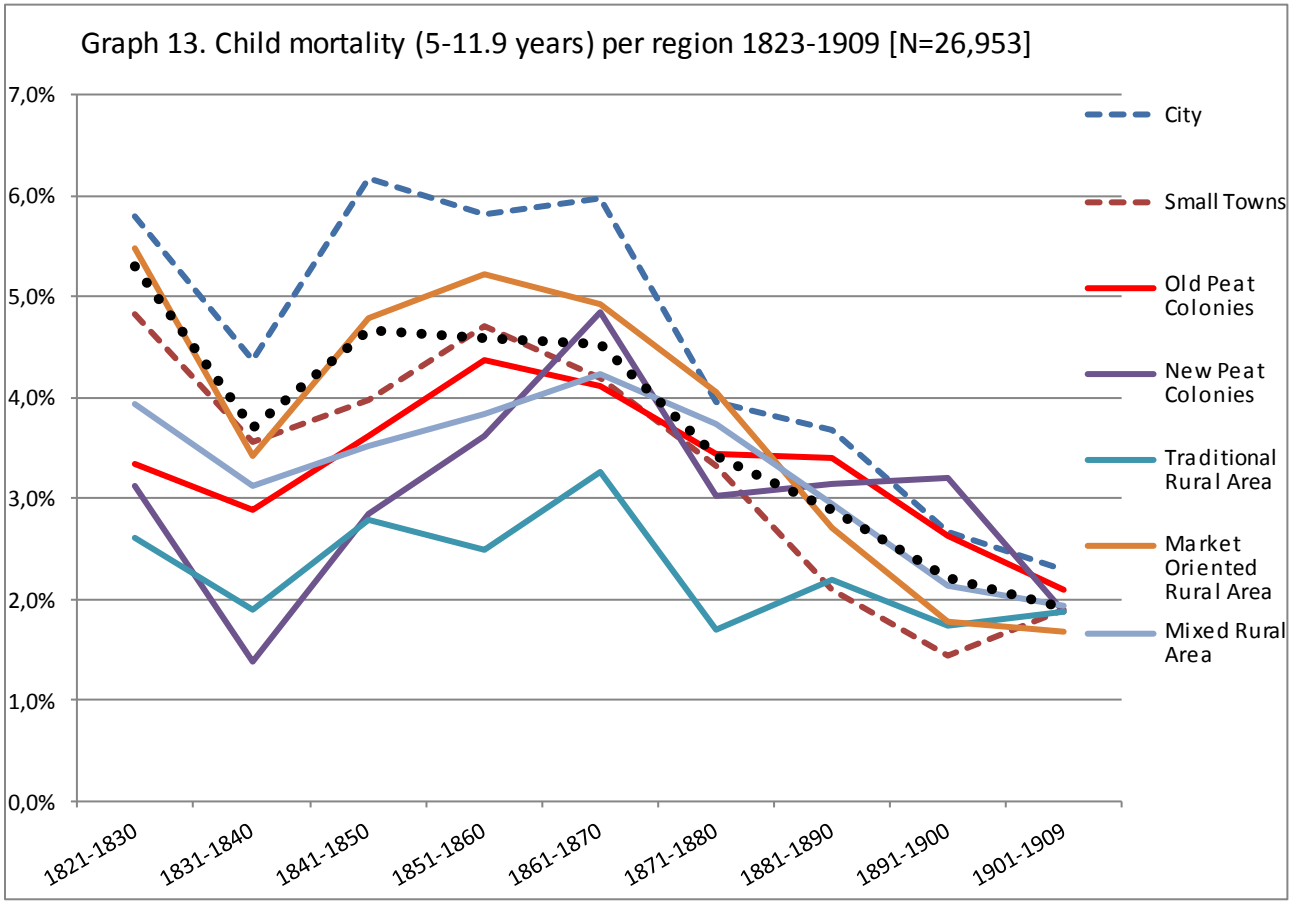
all. Even it seems that during the first phase of modernisation infant mortality rates increased, perhaps because the population was being confronted with more infectious deceases than before, in these comparably isolated villages. The new peat colonies experienced the same development, although infant mortality rated definitely increased when peat digging started to take-off. Again there was no important fall in the infant mortality rate between 1880 and 1900, and only a small one after 1900.

In general from the infant mortality peak in the period 1871/1880 onwards, there was a strong convergence in these rates until 1909 (the period under investigation). As discussed this was on the one hand the result of a strong effect on the high infant mortality rates in the cities, and to some lesser extent in the more market-oriented parts of the countryside, while the originally for baby's very healthy traditional rural area seem to have been largely untouched by the developments improving life chances of infants.



More or less similar patterns show up if we look at the child mortality rate of children aged one to five. In the first half of the nineteenth century these child mortality rates were high in the city of Groningen, though again definitely lowest in the traditional rural area. These large differences had been diminished to some extent in the period 1891/1900. Regional mortality differences afterwards were only fairly small, suggesting that all regions had more or less the same mortality regime for children between one and five. Notwithstanding this convergence, there are some striking differences which suggest that the mortality rates of those slightly older children were influenced by other factors. Already from 1851/60 onwards in most regions the mortality of children between age one and five

started to fall. Even this death rate within the traditional rural area became lower to some extent for the period 1871/1880; afterwards it remained at the same low level. The largest fall in the city of Groningen occurred again directly after 1881/1890; however this happened already a decade earlier in the small towns. Interesting is the development in the emerging peat colonies where the death rate of small children developed from originally low, to one of the highest by 1891/1900. Perhaps this is an indication of the bad socio-economic circumstances in the peat digging areas, which in that case more affected the mortality rate of small children, than of infants in the first year of their life.



Of less importance for the general mortality regime was the mortality rate of children between five and twelve. When children had reached the age of five, the chances to die in childhood diminished rapidly. The peak in mortality for this age group was usually either in the period 1851/1860 and 1861/1870 for different regions. Afterwards the convergence in mortality rates between the different regions was even larger than we have seen for the younger age groups. In the period 1900/1909 mortality rates everywhere were about 2% for this whole seven year period of life. Again, we see relatively very high death rates in the city of Groningen in the first half of the nineteenth century, while the lowest rates were again in the traditional rural area and the still quite traditional emerging peat colonies. The mortality regime of this last region was definitely changing from 1841/1850 onwards, what becomes much clearer when looking at the age group 5-12, but also is visible for the younger age groups whose death rates were also rising slightly form this period onwards. Remarkable is also the very strong fall in death rates of these somewhat older children in small towns and the market-oriented rural area

between 1851/1860 and 1891/1900. Originally having relatively high death rates, both regions ended up having about the lowest death rate for children between 5 and 12 of the area under study.

The most important conclusion is that developments in many respects often coined with the term modernisation lead in the second half of the nineteenth century to a very strong convergence of child mortality rates in the whole area under study. The effects of these developments had definitely the largest effects on child mortality in the city of Groningen. A very high child mortality regime in the first half of the nineteenth century made way for a mortality regime comparable with that in the countryside. Interestingly, urban mortality of older children diminished a decade earlier than infant mortality, which showed a strong downfall only after 1880. In most of the countryside and also the small towns we see the same effect as in the city but to a lesser extent. One interesting exception is that improvements that accompanied modernisation had hardly any effect on the child mortality regime in the most traditional part of the region under study. This region was characterized by very low child mortality both for infants and for older children in the first half of the nineteenth century. If modernisation had any effect on this region's mortality it must have been partly positive, but also partly negative, for instance because of the increasing exposure to all kind of diseases. Consequently, child mortality rates hardly went down in this region during the nineteenth century. The extremely low child mortality in this sandy area in the interior of Drenthe deserves a more detailed investigation, trying to answer the question how it could be possible that child mortality rates were that low.

5. Occupational/social mobility

Modernisation theory states that industrialization causes strong changes on the labour market, which might lessen the influence of the occupations of fathers on the occupations of their sons (Zijdeman 2010). New jobs came into being that had to be filled by the new generation, while for instance education began to play a larger role at the expense of on-the-job-training that often happened under the supervision of the father. Also the rise in wage work with the increasing scale of firms creating whole new career opportunities will have increased the chance for sons to find a different job than their father.

In this paper we do not want to investigate upward and downward social mobility, as there are quite some problems with social stratification schemes trying to pinpoint certain occupations in a specific well defined social group positioned higher or lower than other groups. Especially farmers are in this respect a problem (Paping 2010). In this paper we try in a way to circumvent the problem by not looking at upward and downward social mobility but only to changes of social group. We will use Hisclass (Van Leeuwen & Maas 2011) to define these social groups.

Hisclass distributes occupations into 13 more or less coherent social groups of similar occupations or professions. As it is difficult in our source to make a difference between unskilled labourers inside and outside agriculture we combined group 12 and 13, also because they were so small we combined the tow highest classes 1 and 2 creating eleven similar social or occupational groups. It has to be remarked that because of this, we also not measure occupational mobility in a strict sense, but something to a considerable extent similar to social mobility, without taking into account the direction of this social mobility.

Table 4. The relation between Hisclass and the social divisions used in this paper.

HISCLASS_11			4-class
1+2	Higher manager; higher professionals	1	1
3	Lower managers	2	
4	Lower professionals, and clerical and sales personnel	3	
5	Lower clerical and sales personnel	4	
6	Foreman	5	2
7	Medium skilled workers	6	
9	Lower skilled worker	8	
8	Farmers and fishermen	7	3
10	Lower skilled farm workers	9	4
11	Unskilled workers	10	
12+13	Unskilled farm workers; Unskilled workers not specified	11	
-1	No Hisclass code	-1	-1

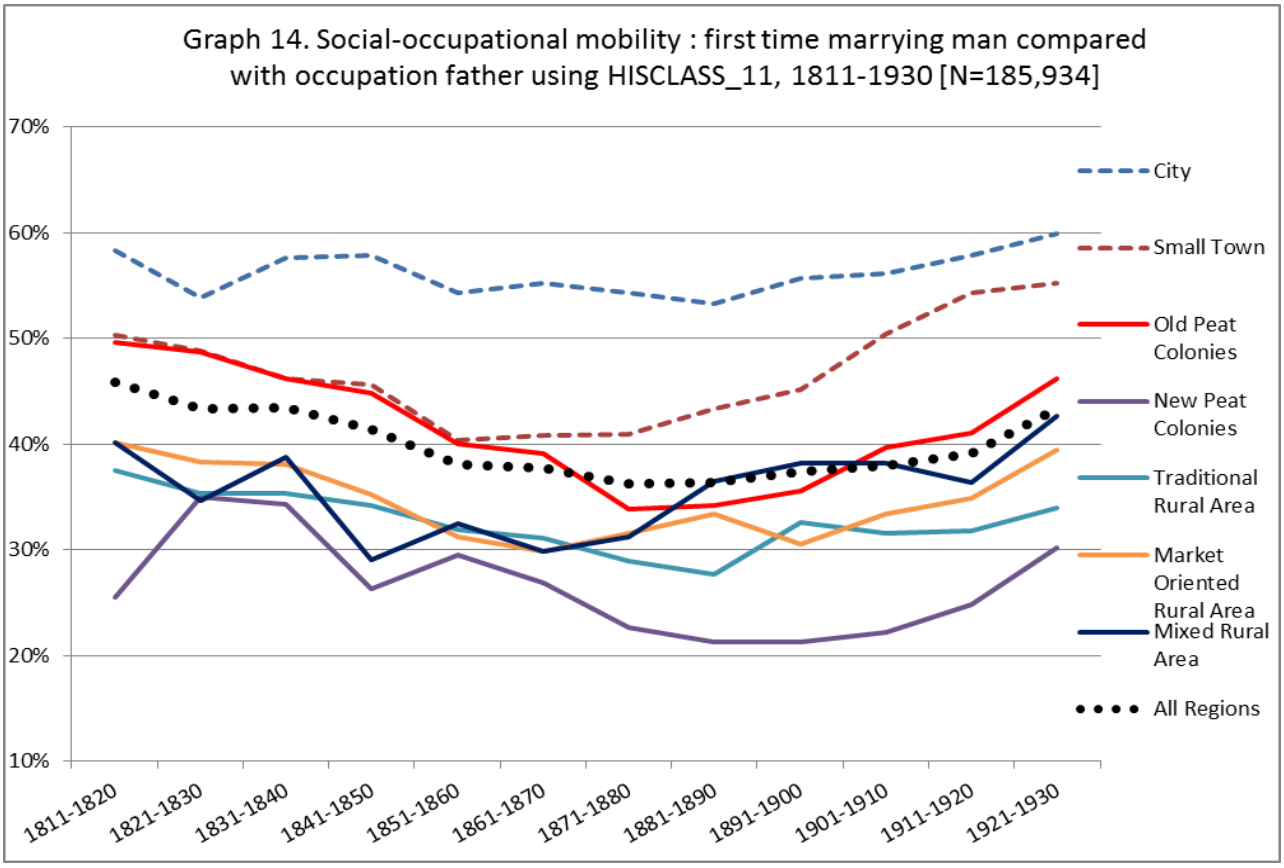
Like others (Zijdeman 2010) we use the Dutch marriage registers who for a majority of the marrying couples give both the occupation of the father of the bride and groom, and the occupation of the bride and groom. Because of the very large problems with the use of female occupations derived from the Dutch civil registration (Paping 2012), we will restrict ourselves to males. We will just compare the occupational or social group of the groom with that of his father and look if they are the same or not. A possible extension of the paper would be the comparison of the occupation of the groom, with the occupation of the bride's father, which will say something about the extent of social endogamy as well.

Chances to move to a different social group strongly diverge over the regions studied. Mobility is high in the city of Groningen and in the small towns, while it is much lower in the countryside with the – to some extent urbanised – old peat colonies taking a middle position. Social or occupational mobility mostly reflect the spread within the local occupational structure. Especially the larger professional groups like labourers and farmers are the lower is the mobility. Changes in social mobility are because of this mainly related to changes in social-economic structure. Because Hisclass offers much more detail positioning those having occupations in services and industry, it is partly the size of these groups that determines the rate of mobility.

Notwithstanding these critical notes, still some clear patterns show up from graph 14. In general social/occupational mobility diminished considerable in the period between 1811/1820 (marriage cohorts) and 1871/1880. After 1880 there is very slow recovery, with a kind of acceleration in the period 1921/1930. Still mobility in 1921/1930 was much lower than in 1811/1820. So modernisation might have stimulated social mobility somewhat, but it at best seems to have reversed a negative trend. This negative trend in the period before 1880 presumably had mostly something to do with the rise of the unskilled group workers whose children had relatively little chance on acquiring a different position than their fathers.

In the different regions usually to a larger or smaller extent the same trend is visible with a fall in mobility and later a rise again. Sometimes the changes are relatively small as in the city of Groningen; however, in the small towns the fall in social mobility was large until 1851/1860, but the rise after 1871/1880 was even larger. Small towns in the north of the Netherlands were in the second half of the nineteenth century indeed real boomtowns were a lot of opportunities were created. The contrast with

the old peat colonies, thatindustrialised in the second half of the nineteenth century, is remarkable. Originally in the first half of the nineteenth century there was no difference at. However, exactly during the period of industrialisation mobility kept on falling, to recover only to some extent from the end of the nineteenth century onwards.



In the rural regions we also see an increase in mobility from the end of the nineteenth century onward, after a downward trend earlier in the nineteenth century. Only the rise in the mixed rural area – a region which did not attract any special attention in our analysis yet – is rather early, starting already more or less from the period 1841/1850 onwards. An explanation can be the nearly complete absence of growing proletarisation in this region (table 2), whereas in the other rural regions the share of labourer households was increasing fast. This sharp rise in proletarisation diminishing social chances must have partly off-set the mentioned positive influences of modernisation on the social mobility. Nevertheless mobility rates were again starting to increase in the countryside somewhere in the second half of the nineteenth century.

In conclusion, a rise in social mobility is visible from the end of the nineteenth century that can be more or less related to modernisation. But the rise started late and was not revolutionary, certainly not if the previous fall was taken into account. The only region that shows real strong increases in social mobility are the small towns after 1850; in these relatively small societies rapid developments created increasingly more new opportunities for the new generation. In other regions that experienced rapid economic changes, this change did not positively affect social mobility in the short run. This becomes

clear form the examples of the old industrialising peat colonies and also of the traditional rural villages that turned into rapidly emerging new peat colonies.

6. Geographical mobility (migration)

The last topic we will deal with in this paper is migration. We measure migration by looking at how many of the grooms or brides married in a different region than they were born. So we take only migration to different regions in account. In this respect our eight regions play an important role; however, it has to be remarked that also some of the grooms and brides were born outside the two provinces under consideration. Of course such moves we also considered as migrations. We have analysed grooms and brides separately, while we also have taken into account the four different social groups we also used when discussing the average age at marriage. However, in this first draft of the paper we will on present the general data for female migration.[5] Prime proposition is that modernisation, and especially the improvement of transport and communication from the second half of the nineteenth century has been an important stimulus for migration. For each region we looked at the share of brides or grooms who came from a different region, so our measure relates to *in*-migration. We also could have studied *out*-migration; however, the problem is that we can only see out-migration if this is migration within the two provinces under study, so we really would miss in that case a considerable and presumably also unrepresentative part of the migration. Those limited number of marriage partners for which no place of birth was given in the database were not included in the figures.

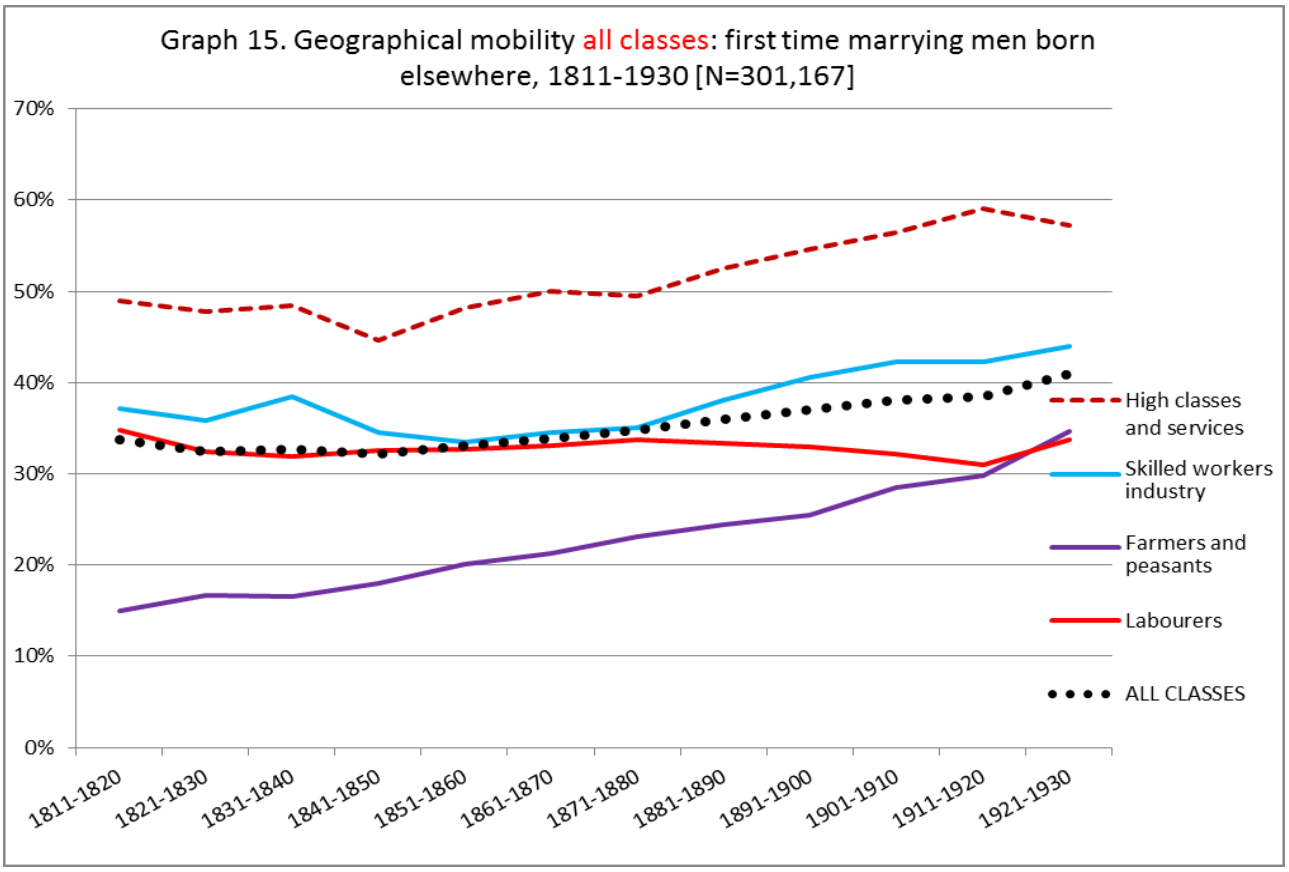
Male geographical mobility

At first we will look at graph 15 with the general migration rates of different social groups, from which we can conclude that the overall male population of Groningen and Drenthe was quite mobile and seemed to have easily moved between regions with different economic structures. In every period at least one third of the males married in a different socio-economic than where they were born in. In general there was a slow but steady increase in migration rates starting already before the middle of the nineteenth century. Migration rates of those with better positions either in services or industry behaved largely the same, although the increase in migration rates started a little bit earlier. In the first decades of the nineteenth century there was a tiny decrease in migration according to the marriage database.

The two other largely agrarian social groups, however, show a quite different pattern. Male farmers and peasants originally were for a very large part born inside the same socio-economic region as they were marrying. Migration rates of 15% for 1811/180 seem large, but these were partly the result of very short distance movements from nearby regions belonging to a different group, think for instance of migrations between the mixed rural area and the market-oriented rural area. Surprisingly, the migration rates of this on first sight quite sedentary group increased continuously in the course of the nineteenth century and the first decades of the twentieth century. In the end about a third of the farmers were born in a different region, than the one they were going to settle after World War I. They

[5] Later on we might consider relating this migration behaviour to the occupation of the groom.

had become just as mobile as the group of labourers, mainly working in agriculture, but also as peat diggers, or doing all kind of unskilled work in the cities or in factories. In contrast with the other groups the migration rates of this very large group in the northern part of the Netherlands remained remarkably stable during the whole period under study. About one third of the labourers were coming from a different socio-economic region both in the early decades of the nineteenth century, as well as after World War I.

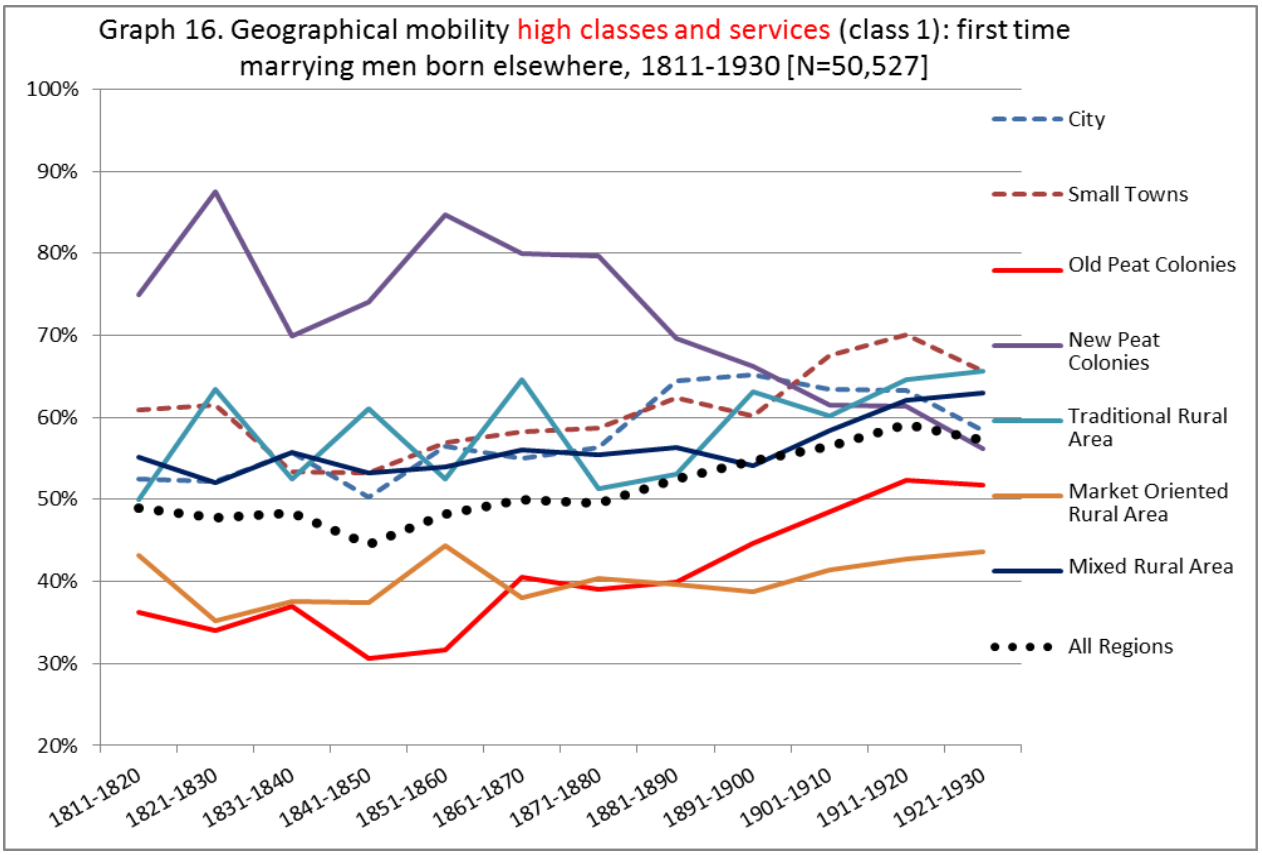


Transport and communication improvements related to modernisation did not seem to have had any effect on this group, while the increase of mobility for farmers and peasant already started so early that it can also not be easily attributed to second half of the century modernisation. For the other groups in society, the middle of the nineteenth century seemed to have been something like a watershed. For them it was easier to take advantage of the improvements going, which might explain their increase in mobility rates, going up with about 10% for both groups distinguished.

Concentrating at first on the richest group – males with an occupation belonging to the highest classes and the service sector – it becomes clear that there were very large differences in migration rates between the different regions (graph 16).

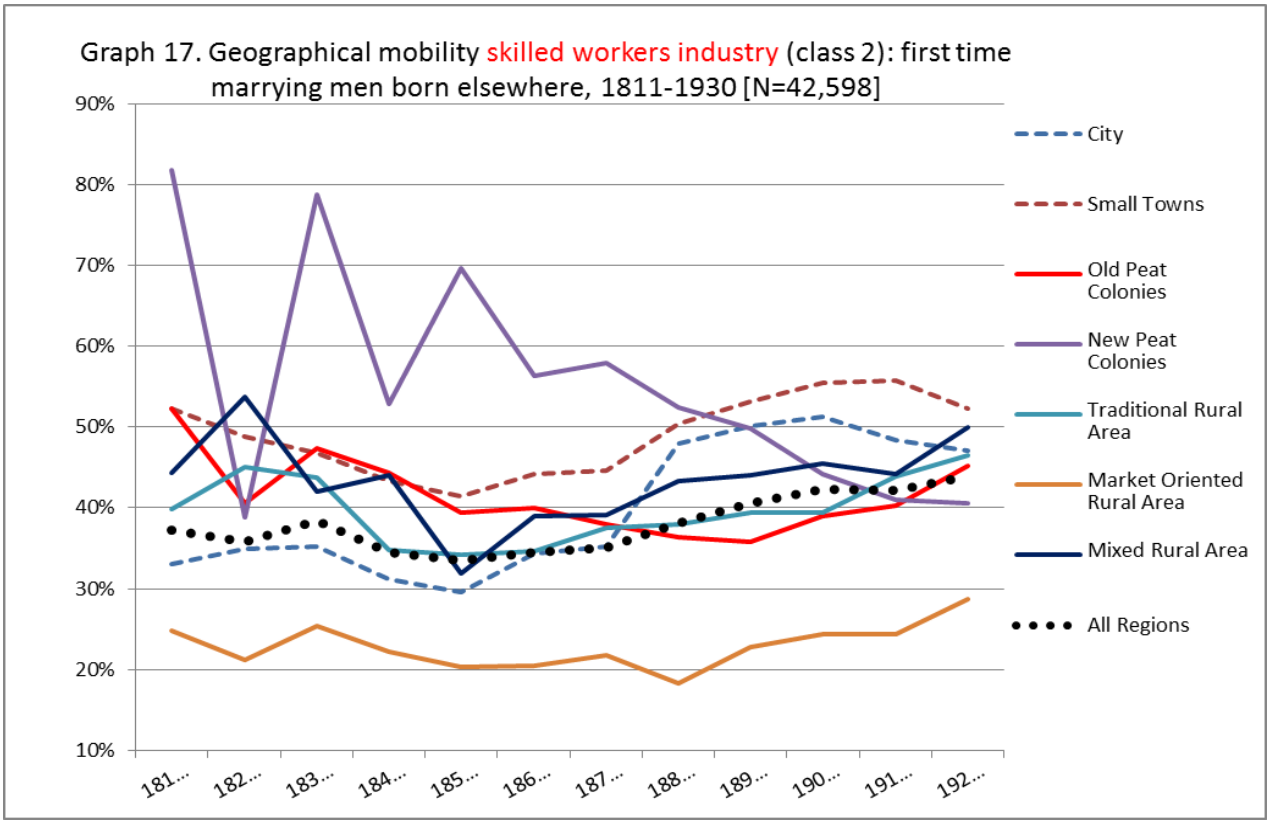
The originally thinly populated emerging peat colonies were at least for merchants, shippers and shopkeepers already mainly an immigrant-region in the first half of the nineteenth century, attracting many newcomers to settle in the region. With the rapid rise of population more employers and self-

employed in the service sector (people belonging to the social elite were scarce in this region) were born locally; however, immigrants remained relatively important until about 1900, after which migration rates for this social group fell to an average level. If we do not take the special case of the emerging peat colonies into account, the migration patterns of this social group developed quite similar in all other regions, with a slow decrease until the middle of the nineteenth century, an afterwards a steady increase. There are no signs of any convergence during the period under study. In the regions where migration rates were relatively high (small towns and traditional rural area), they remained high, whereas regions were the employers and self-employed relatively often were recruited locally (market-oriented rural area and old peat colonies), this remained the case until the first decades of the nineteenth century.



Nevertheless, it has to be pointed out that the strongest increase in migration rates for this service sector group happened in the rapidly industrialising peat colonies, with an increase of 20% between 1851/1860 and 1911/1920. Migration also very strongly increased in the same period in the small towns by about 15%, again this was a region where economic changes often went rapidly, attracting, presumably, extra people from the service sector. You could also state that developments in Groningen fit in this pattern; however the rise of migration rates of those belonging to the highest social classes and the service sector in this large city came already to an end in the period 1891/1900. A reason might be that the very strong increase in size of the city in the previous half a century, quite naturally reduced migration rates afterwards somewhat. Not the attraction of the city diminished in the first

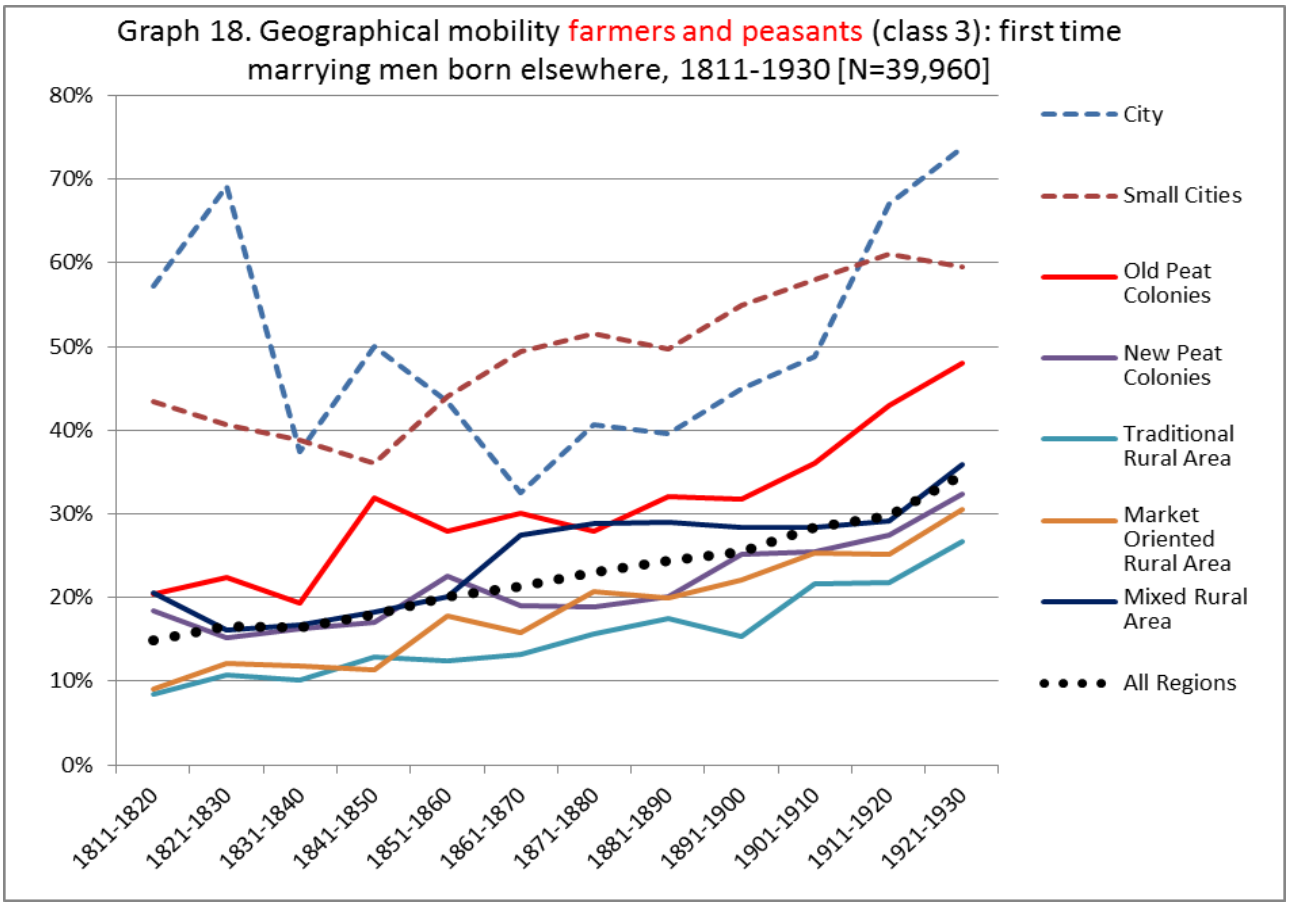
decades of the twentieth century, but so many people active in the service sector remained in the city, lowering migration rates.



For the total of the two provinces under study, there was an increase in the migration rates from the middle of the nineteenth century, but especially from 1870/1880 onwards, going on until after World War I for the skilled and semi-skilled workers in industry. Again we see the same development of falling migration rates for the emerging peat colonies. For the other regions, developments were rather diverging, while again migration rates of different regions did not converge to any extent. The rise in the second half of the nineteenth century of overall migration rates can mainly be attributed to developments in the urban regions. Migration rates of skilled workers, both in the city of Groningen and even more in the small towns, went up considerably form 1851/1860 to 1901/1910. In this period cities and especially smaller towns became increasingly attractive places to settle if one aimed at a career as skilled worker in industry. It seems that modernisation had a very profound effect for the movement to cities for this sector.

In contrast with the service sector, rural developments were not very much in line with urban developments for those skilled and semi-skilled active in industry. Migration rates in the market-oriented rural area, remained low until the end of the nineteenth century, to increase quite rapidly in the next forty years. Artisans and craftsmen in the market-oriented rural area were much more than elsewhere born locally, and the region did not attract many newcomers. The last is not surprising as there were nearly no signs of industrialisation. Much more open were originally the old peat colonies, with nearly half of the marrying artisans being born outside the region. However, migration rates started to fall continuously during the whole of the nineteenth century, and it was only at the end of the nineteenth century that in-migration of skilled industrial workers again started to increase. Less

outspoken are the developments in the traditional and the mixed rural area. In both regions after a fall in the first half of the nineteenth century, relative migration started to increase again. In contrast with the urban regions, however, this increase in migration continued in the early decades of the twentieth century.

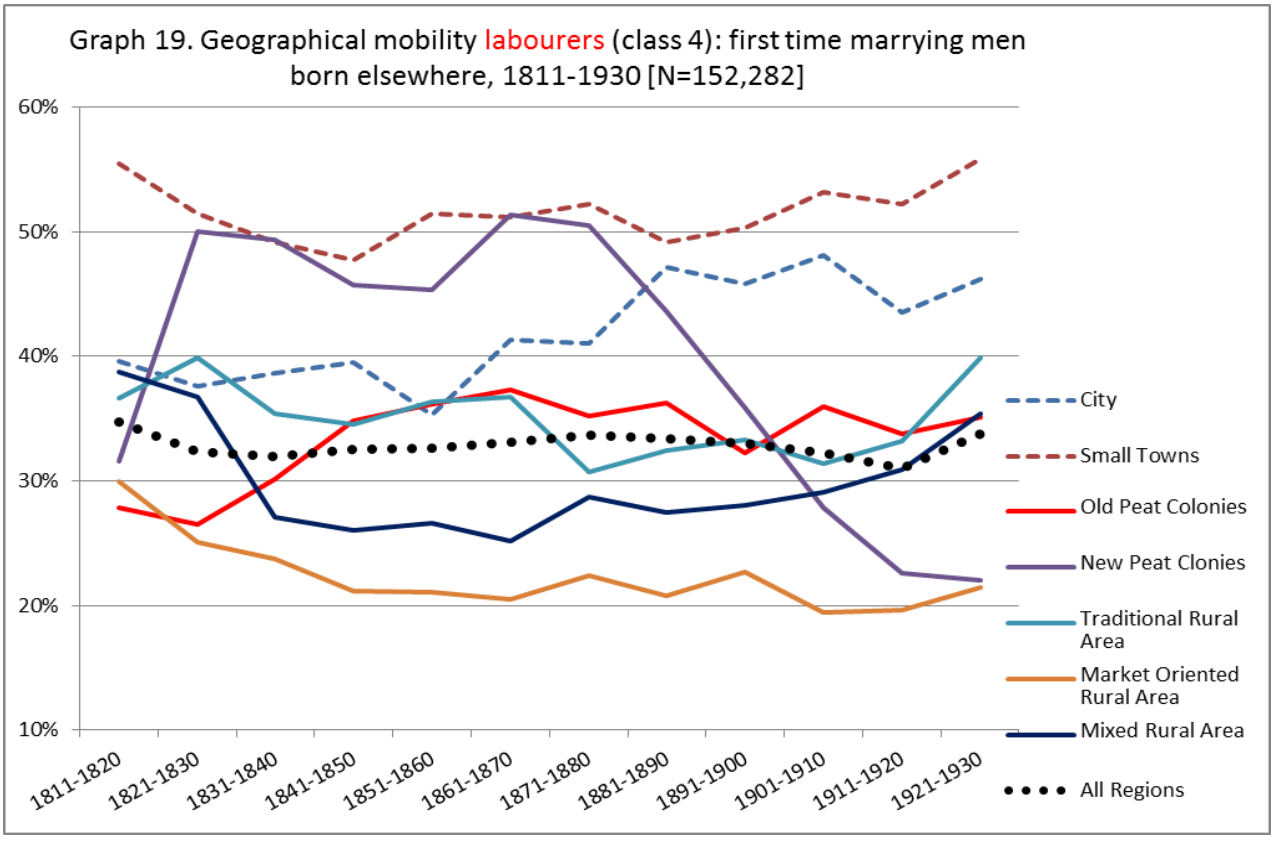


Not surprisingly mobility rates of the limited number of farmers marrying in the city or the small towns were much higher than in other regions, as these farmers were of course more connected with the surrounding countryside than to the town within whose border they accidentally were living. Taking this into account migration rates of 50% are not even very high, pointing at that many farmers married in the municipality where they were born. Much more interesting are of course the developments in the countryside where the large majority of the famers lived. The continuous overall increase in migration rate, we came across previously, happened to diverging extent in all the rural regions under study, even in the emerging peat colonies, where the peasants usually were quite similar to those in the traditional rural area. In contrast with the other social groups, migration-rates of peasants in the emerging peat colonies remained relatively untouched by the rapid developments the area experienced because of the rapid rise in peat digging from the first half of the nineteenth century onward.

Migration rates of farmers were the highest in the old peat colonies in the first half of the nineteenth century, and that remained the case ever after. In the period 1921/1930 nearly the half of the farmers

marrying there were born elsewhere, a considerable increase with the about 20% a century before. Though this was in absolute numbers the highest increase of the migration rates, it has to be remarked that relatively nearly everywhere in the countryside migration rates of farmers more than doubled. Even in the market-oriented rural area, where the high price of farmsteads made it difficult to obtain one for outsiders, the share of farmers who were not born in the region increased from less than 10% to 30%. In the much more closed traditional rural area, with however, many more opportunities to establish small new farmsteads, actually the same development took place. Where migration of farmers in these regions originally mainly was oriented towards places with the same kind of agriculture, farmers began increasingly to look for opportunities to start farming in the two provinces as a whole, with much less interest in the specific kind of agriculture in the area. Farmers and peasants definitely became more outward looking in the course of the nineteenth century and the early decades of the twentieth century. However, it is difficult to directly relate this development to the modernisation process in the second half of the nineteenth century, as this development already had started several decades earlier.

We already mentioned that developments in migration rates of labourers were completely different than of the other social groups studied. Here we do not see any significant development in the period under study. The average does not disguise enormous changes on regional level as graph 19 shows, although there were some developments worth mentioning. In the new peat colonies the share of labourers from elsewhere increase quite rapidly after 1811/1820, due to the arrival of many labourers attracted by the boom in peat digging in several of these municipalities. During this boom about half of the labourers marrying were born outside. However, when peat digging came slowly to an end from the end of the nineteenth century onwards, resulting in a severe crisis in peat digging in the first decades of twentieth century – only temporary halted by the boom during World War I – the attraction of these municipalities for labourers from elsewhere rapidly disappeared.



In most other regions migration rates remained quite stable in the nineteenth century. The small towns showed first a minor fall in the first half of the nineteenth century, and afterwards a rise, just as to some extent the mixed rural area. In the market-oriented area, the fall in the first decades was not even accompanied by a rise later in the nineteenth century. In the traditional rural area migration rates of labours kept on falling slowly until the first decades of the nineteenth century. In the old peat colonies it was about the other way around: a rise in migration rates in the first half of the nineteenth century and afterwards stagnation. There are no indications that the many factories attracted a lot of extra unskilled labourers to this region, suggesting that the work was mainly done by locally born labourers.

Though one would expect that it were the male labourers who should be influenced to the largest extent by the developments accompanied by modernisation and industrialisation processes in the second half of the nineteenth century, our data do not show many proof of that. It was the other way around, rising transport and communication possibilities changed the prospects of labourers seemingly only marginally, leaving the lives of most of the unskilled labourers quite untouched if it comes to migration. However, it has to be remarked that we only looked at the origin of labourers settling in these two provinces, while we neglect out-migration., It is well-known that exactly in the second half of the nineteenth century there was a large rise in out-migration of labourers to the cities in the west of The Netherlands and to the United States (mainly from the Groningen countryside).

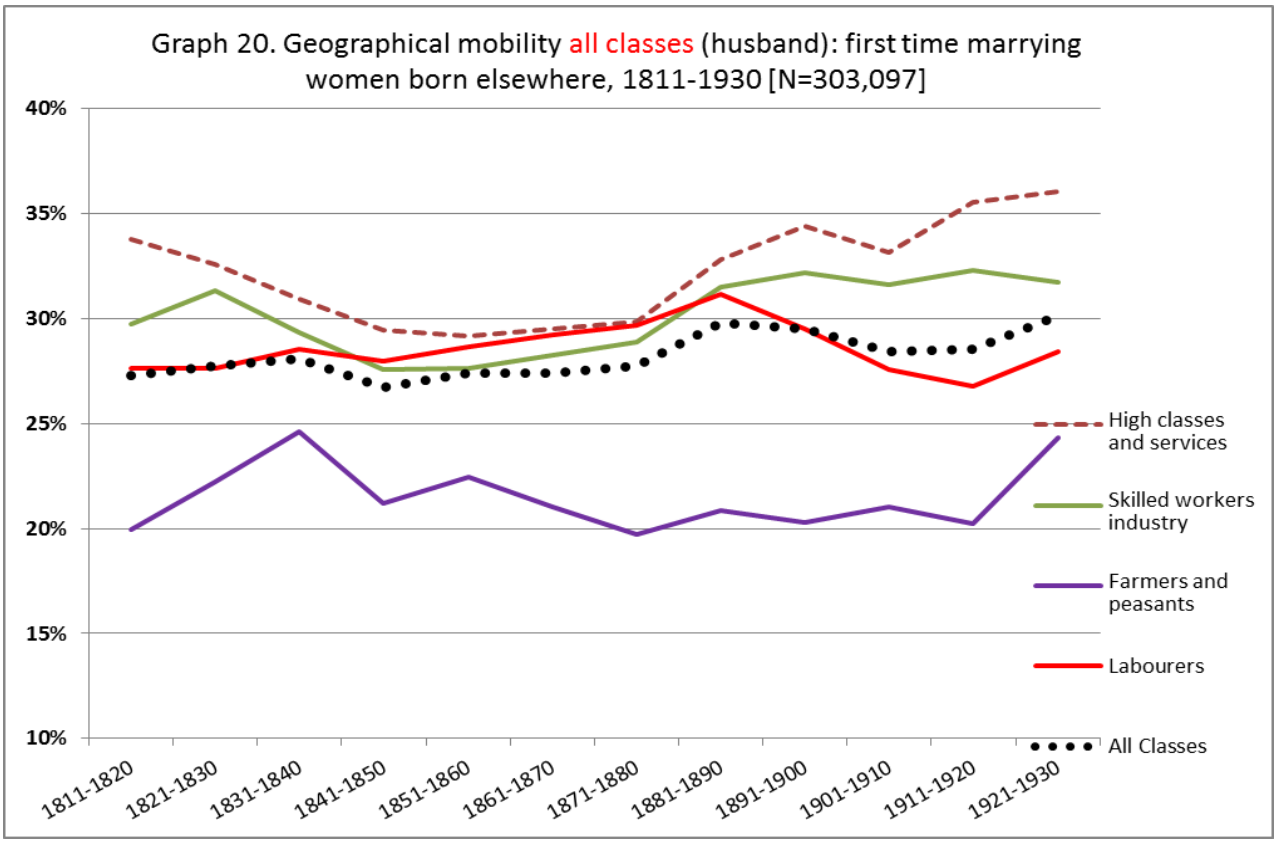
Female geographical mobility (migration)

In many cases the occupation of the bride is not mentioned in the marriage certificates. Consequently, we chose to use the occupation of the husband to classify marrying women. As mentioned, we do not present a detailed analysis on the level of the different regions distinguished in this study, though we might do in the future. The result of our analysis is that mobility rates for women were a little bit lower than for men. Partly, this will have been a real phenomenon, but it might be also to some small extent attributed to the custom to marry in the home village of the bride, and not in that of the groom. However, this custom will have been only of importance for the higher social classes, for which the geographical mobility of women indeed was substantially lower during the whole period under study (45-60% compared to 28-38%). Gender differences were less for brides of skilled and semi-skilled workers in industry, and even fairly small for the brides of labourers. Notwithstanding these gender differences, migration rates for women show rather the same patterns as among men if one looks at social groups: a relatively low migration rate among farmers and peasants, and a higher rate in the group marrying people from highest classes and working in the services, but these differences in mobility were considerably smaller for women.

A notable exception to the general pattern that mobility rates among women were lower, were the brides of farmers until about 1861/1870. These brides were more often coming from elsewhere. However, while mobility rates for male farmers constantly went up in the course of the nineteenth and early twentieth centuries, for their brides these rates remained rather stable, neglecting a few short term changes. Only in the last period 1921/1930 under study mobility rates of female farmers increased. So, developments stimulating geographical mobility in the nineteenth century where of large importance for male farmers, but not at all for female farmers; a surprising difference which demands further detailed research to explain it.

If we look at all marrying women together there was a slight increase in migration rates between 1811/1820 and 1921/1930 from 27% to 30%, though it was by no means impressive with small minor

peaks around 1881/1890 and 1921/1930. On the level of social class, convergence in mobility rates was limited. Brides of those occupied in a relative good position in industry and services show a definite fall in mobility until 1841/ 1850 (more than of their marriage partners). Afterwards migration rates increased again, much in line with the males in this social group. Gender differences in development in geographical mobility were larger for labourers. Female mobility clearly increased until 1891/1900; afterwards it fell again to the level of the first half of the nineteenth century. In contrast with this, general male mobility rates of labourers were remarkably stable. It is unfortunately still unclear what the origin of this difference in development over time is.



Overviewing all presented figures on the development of migration over time, it becomes clear that both for males and females mobility increased from the middle of the nineteenth century, but only for the professionals, managers and skilled workers in industry and services. This development might be the effect of changes in for instance transportation and communication connected to modernisation, which might have stimulated this groups' mobility. For unskilled labourers and farmers' wives there was no effect at all on the migration rate that could be easily connected to modernisation, whereas the increase in mobility of male farmers was a structural development already starting in the first half of the nineteenth century.

7. Concluding remarks

It is difficult to summarize our findings in a few words. We wanted to investigate under what general circumstances modernisation in the second half of the nineteenth century had the largest measurable effects on the lives and prospects of different social groups by looking at four measures that according to us would be influenced by "modernisation", a container-term we use for all major changes going from 1850 onward. For two provinces in the north of the Netherlands we made a geographical division of seven socio-economically rather homogeneous regions, while we also tried to distinguish four rather broad social categories. Our descriptive method resulted in a large number of graphs showing all kind of social and geographical differences in developments over time. Although there were certainly patterns, in general it proved rather difficult to connect most of the developments to a kind of modernisation of society in economic, social and cultural respect in the second half of the nineteenth century.

We looked at age at first marriage, child mortality, occupational or rather social mobility and geographical mobility for ten year periods from 1811 to 1930 (if possible) using very large databases containing nearly all the people living in the area under study. Accelerations in developments appeared difficult to pinpoint at a certain decade, although somewhere in the second half of the nineteenth century most of the indicators show definite changes. What seems to be the most striking result next to this rather confusing picture is that there were so many similarities in the developments of our measures for both the social groups and even more for the different regions. Consequently, we did not succeed in finding a region that experienced certain developments connected to modernisation always earlier than anywhere else.

The most clear example in this respect are the development of the average ages at first marriage for different social groups in different regions, that nearly all show the same trend during the period under research. In the first half of the nineteenth century average ages at marriage began to increase, though from 1860 a continuous fall started that might have been related to modernisation, which in that case had about the same effect for males and females, for every social group under every economic circumstances. For non-agrarian middle class groups average ages at marriage converged in different regions, suggesting that these groups were more affected. For farmers and unskilled labourers local circumstances kept on playing a large role as regional differences remained in existence.

The general developments of the average age at marriage might fit into a movement from a more traditional "agrarian-artisanal marriage model" to more a "proletarian model" connected to modernisation. However, in that respect it is difficult to explain why the general fall in age at marriage over time was less related to more people becoming wage workers, and more to a distinct fall of the age at marriage within each social group. If a proletarian model became more important, this must have been the case for all social groups, even for unskilled labourers. Geographically, the fall in average ages at marriage was largest in the traditional rural area and the rapidly developing emerging peat colonies, the effects on the other hand were most limited in the city of Groningen. This might suggest that modernisation had less effect in a relatively modern large city than in originally relatively backward and less market-oriented rural areas.

If we look at child mortality, however, we find completely the opposite regarding the influence of modernisation. The largest effects on child mortality happened in the city of Groningen. A very high child mortality regime in the first half of the nineteenth century changed from around 1870/1880 onwards into a regime comparable with that in the countryside. However, in the most traditional rural

region under study child mortality rates hardly went down in the period after 1880; however, these rates were already very low during the whole nineteenth century. If modernisation had any effect on child mortality in this rural region it must have been partly positive, but also partly negative. All the (urban and rural) regions together show a very strong convergence in mortality rates in the last decades of nineteenth and the first decade of the twentieth centuries. So very strong regional differences disappeared, presumably as a consequence of overall improvements in the standard-of-living, in medical practise and in the sewage system, the drink water provision and a large stress on hygiene, which had the most effect in urban regions where the situation in especially the last aspects was worst.

The developments in occupational mobility are even more difficult to relate to modernisation. It was only at the end of the nineteenth century that some improvements are visible, while occupational – or better social mobility the way we measure it – decreased slowly during most of the second half of the nineteenth century. Taking into account that this fall in mobility already started in the first half of the nineteenth century, occupational mobility in 1921/1930 was still even lower than 1811/1820. The only region that shows real strong increases in social mobility are the small towns after 1850; in these relatively small societies rapid developments created increasingly more new opportunities. In regions like the industrialising old peat colonies and the emerging new peat colonies that also experienced rapid economic changes, this change did not positively affect social mobility, at least not in the short run. In general our research does not suggest any movement to a more open society due to modernisation processes going on in the second half of the nineteenth century.

Geographical mobility is again to some extent a different story. Both for males and females mobility within the non-agrarian middle classes increased from the middle of the nineteenth century, for males in nearly every region under study. Just as with ages at first marriage, these skilled and educated groups active in service and industry seemed to have been mostly effected by developments connected with modernisation, like improvements in transport and communication, making it much easier and attractive for them to migrate. You would expect that unskilled labourers also would take advantage of these developments, but our research does not show any increase in migration rates of exactly this group.

In conclusion, although we find some effects of the large changes in society which were taking place from the second half of the nineteenth century, these effects were often less than expected, and were sometimes stronger for specific groups, and within certain regions. However, our results for the developments in age at first marriage, child mortality, and geographical mobility make it difficult to say in general what kind of region is more affected by modernisation. Next to this, the suggested effects on mobility, whether geographical, or social or occupational seem to have been overrated. The rise in dynamics we came across proved largely only making up for a fall in dynamics in the earlier decades of the nineteenth century. It might be the case that the limited effect of modernisation on mobility from 1850 onwards is a logic consequence of a relative modernity and openness of Dutch society dating back from the seventeenth and eighteenth centuries. It is of course not easy for a society that is already characterized by a socially and geographically very dynamic population, to become even more open to a large extent.

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